

# TC-H5600

## SERVICE MANUAL

AEP Model  
UK Model  
E Model



This unit is the cassette deck  
for the MHC-5600 component system.

Model Name Using Similar Mechanism	TC-WR97ES/WR870
Tape Transport Mechanism Type	TCM-200R8

### SPECIFICATIONS

Recording system 4-track 2-channel stereo  
Frequency response (DOLBY NR OFF)  
30 – 14,000 Hz ( $\pm 3$  dB),  
using TYPE I cassette  
(Sony HF-S)  
30 – 15,000 Hz ( $\pm 3$  dB)  
using TYPE II cassette  
30 – 16,000 Hz ( $\pm 3$  dB)  
using TYPE IV cassette  
0.06% WRMS  $\pm 0.16\%$   
(DIN)  
Wow and flutter  
Inputs  
PHONO (phono jacks):  
sensitivity 5 mV  
impedance 47 kohms  
VIDEO (phono jacks)  
sensitivity 300 mV  
impedance 47 kohms

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.  
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Design and specifications subject to change  
without notice.

### Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

### Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270°C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

STEREO CASSETTE DECK  
**SONY**®



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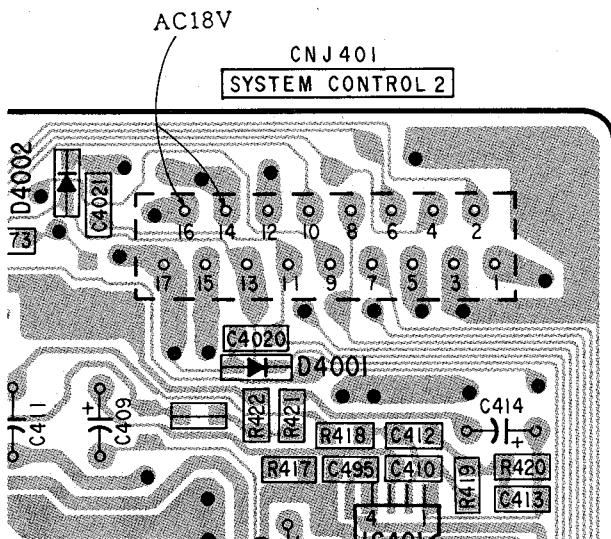
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**SAFETY-RELATED COMPONENT WARNING!!**

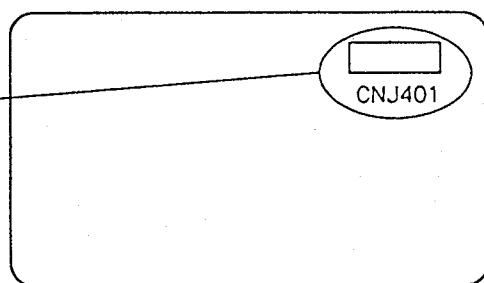
COMPONENTS IDENTIFIED BY MARK OR DOTTED LINE WITH MARK ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

**Caution when repairing**

Normally the power of this set is supplied from the TA-H5600 amplifier connected. When only this set is repaired, connect the power of 18V AC as shown in the figure below.



【PIN JACK BOARD】(conductor side)

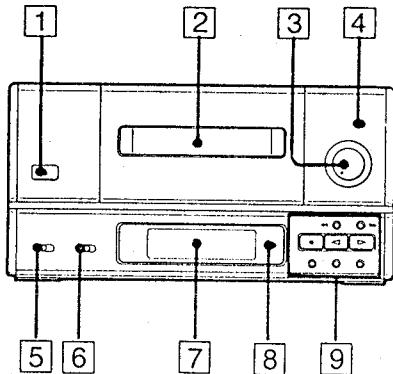


## SECTION 1

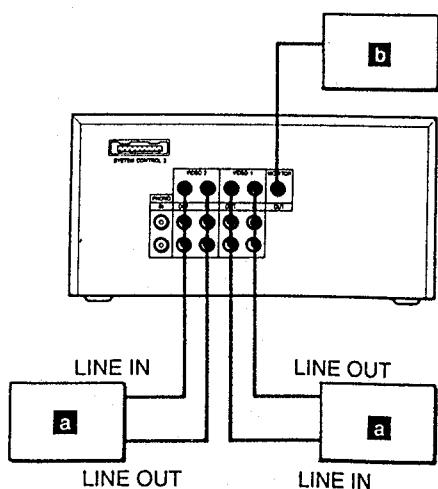
### GENERAL

This section is extracted from instruction manual.

#### LOCATION AND FUNCTION CONTROLS



- ① △ OPEN/CLOSE button
- ② Cassette holder
- ③ REC LEVEL (recording level) control
- ④ AUTO REC LEVEL (automatic recording level) button ⑥
- ⑤ DOLBY NR (Dolby Noise Reduction) button ④
- ⑥ DIRECTION MODE button ⑥
- ⑦ Display window
- ⑧ COUNTER RESET button  
Resets the counter of the cassette deck to "0".
- ⑨ Tape operation buttons
  - ◀▶ : Fast winding
  - : Stop
  - ▷ : Forward play
  - ◁ : Reverse play
  - II : PAUSE
  - : MUTE (Muting)
  - : REC (recording)

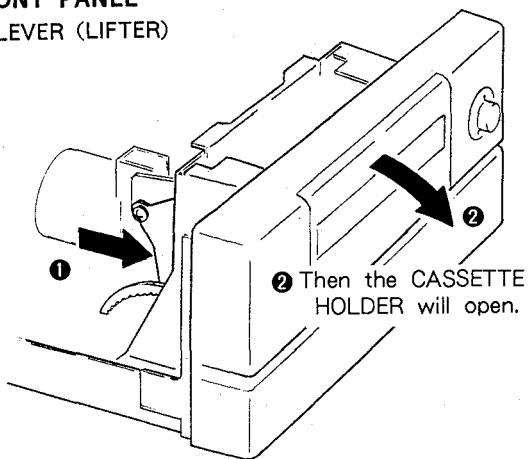


You can connect a VCR **a** to the VIDEO 1 or VIDEO 2 jacks. You can also connect a monitor TV **b** to MONITOR OUT. (TV with MONITOR IN jacks only.) To select VCR, press the VIDEO FUNCTION selector and light up the VIDEO 1 or VIDEO 2 indicator.

## SECTION 2 DISASSEMBLY

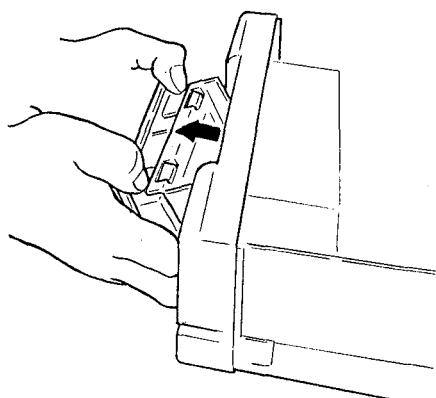
NOTE: Follow the disassembly procedure in the numerical order given.

**• FRONT PANEL  
LEVER (LIFTER)**

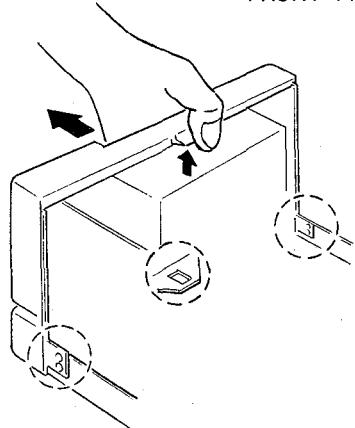


① Push LEVER (LIFTER) in the direction of arrow ①.  
(Refer to the item of CASSETTE HOLDER on page 5.)

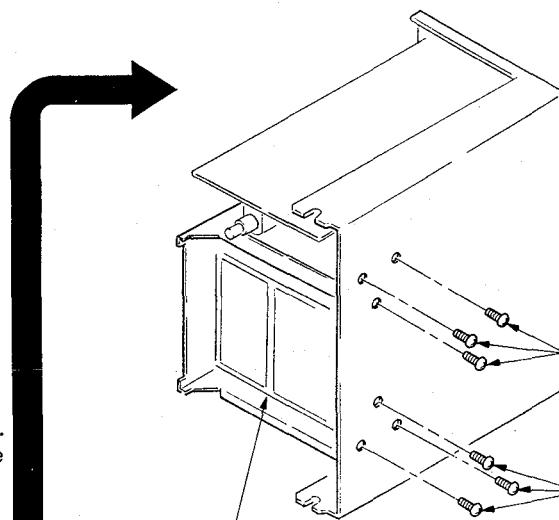
**CASSETTE LID**



**FRONT PANEL**

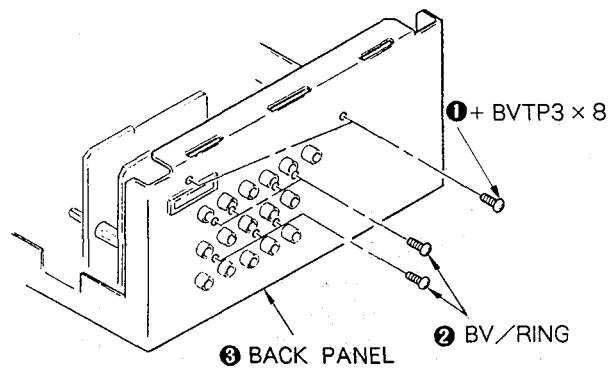


**• MECHANISM DECK**

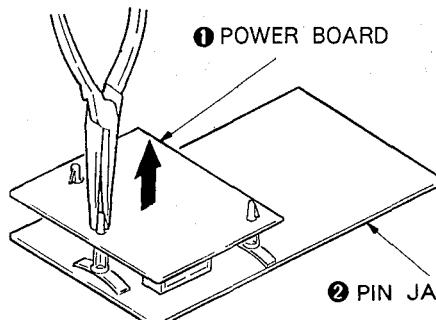


**② MECHANISM DECK**

**• PIN JACK/POWER BOARD**



**③ BACK PANEL**

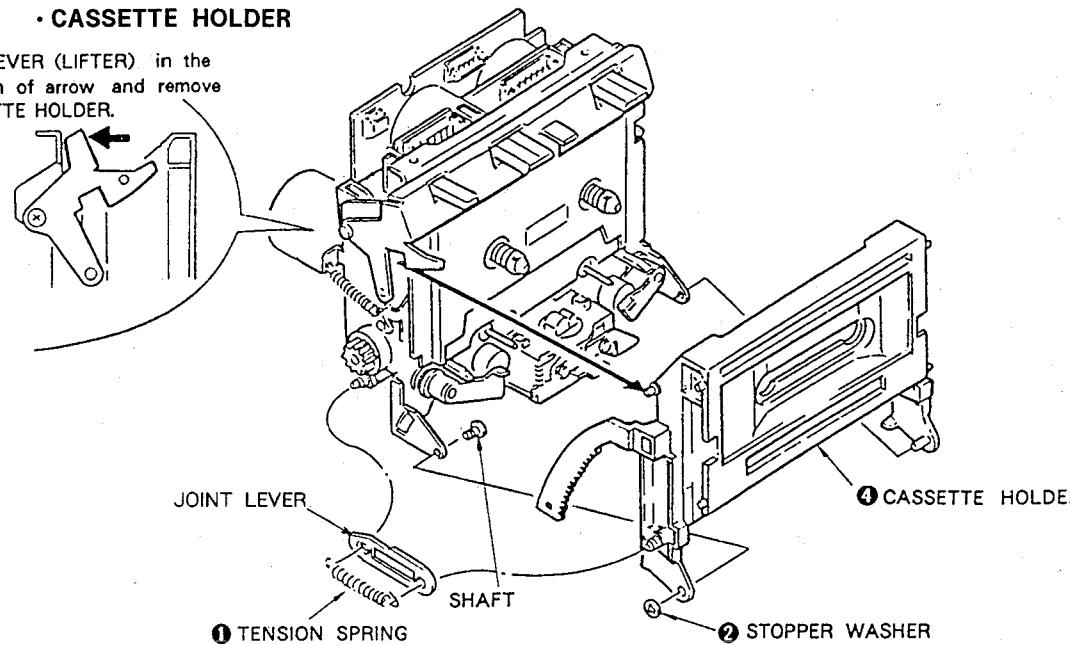


**① POWER BOARD**

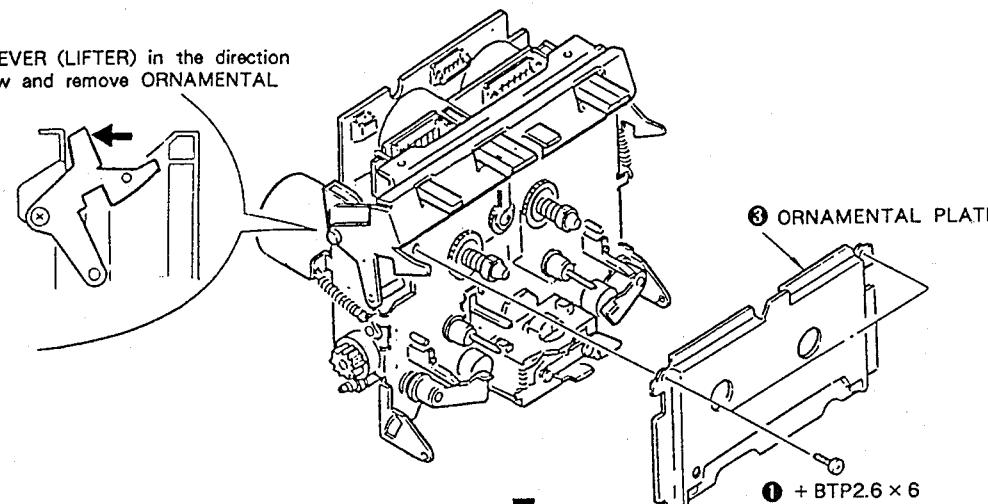
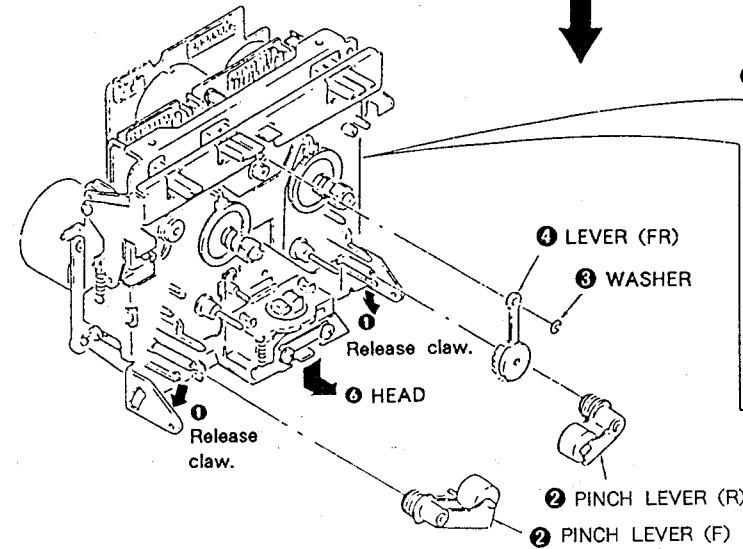
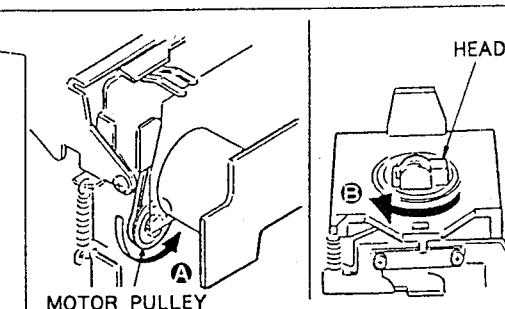
**② PIN JACK BOARD**

**CASSETTE HOLDER**

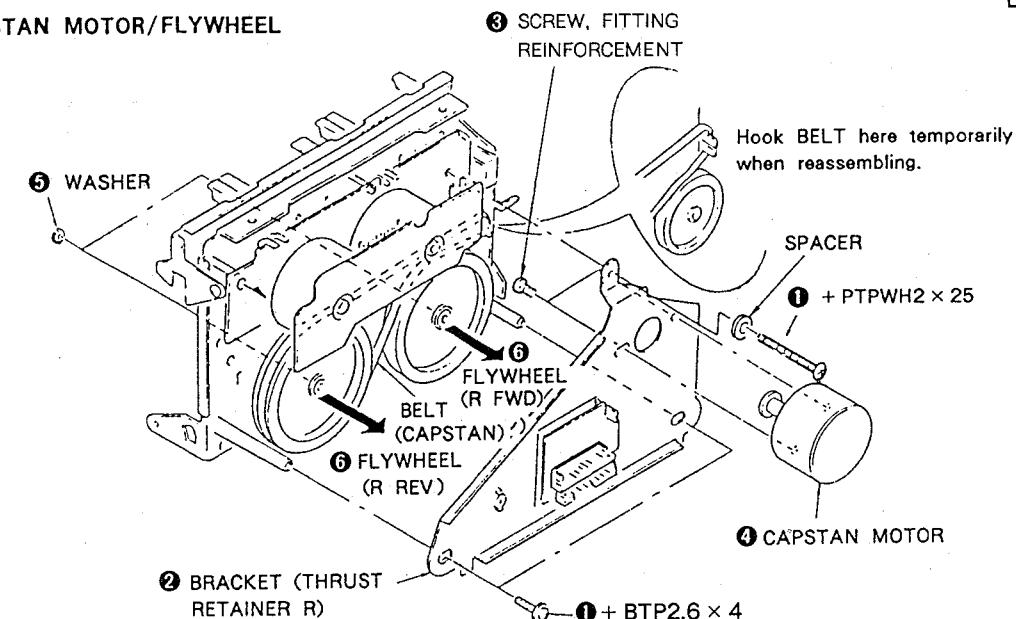
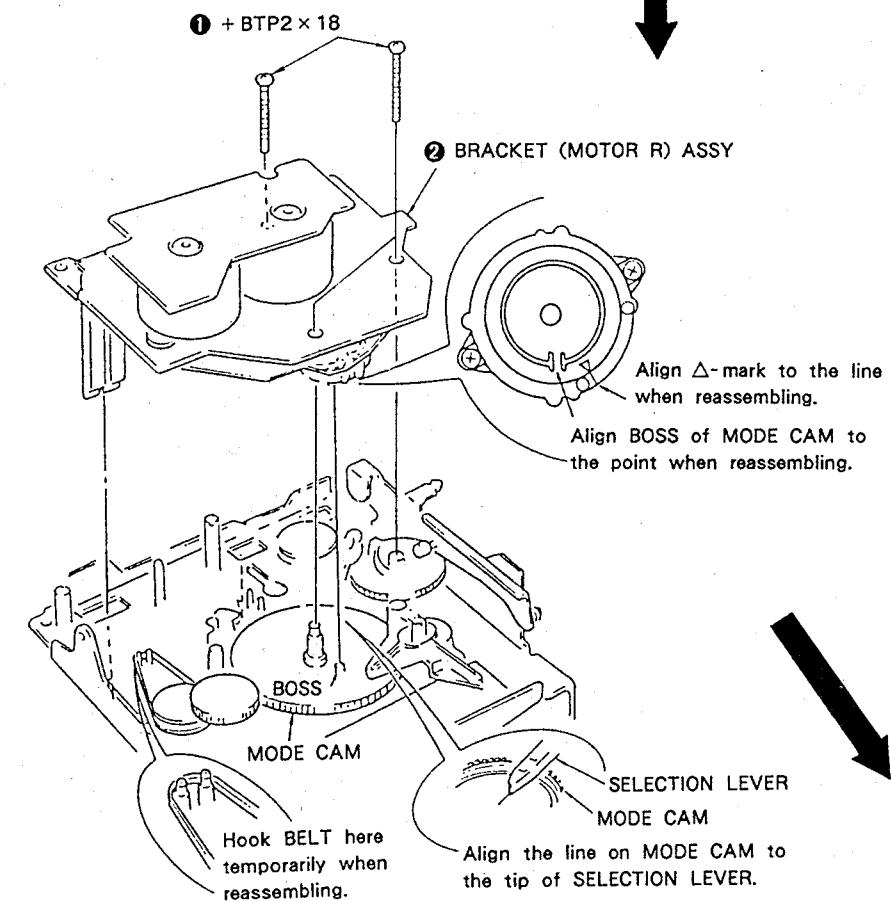
- ③ Push LEVER (LIFTER) in the direction of arrow and remove CASSETTE HOLDER.

**ORNAMENTAL PLATE**

- ② Push LEVER (LIFTER) in the direction of arrow and remove ORNAMENTAL PLATE.

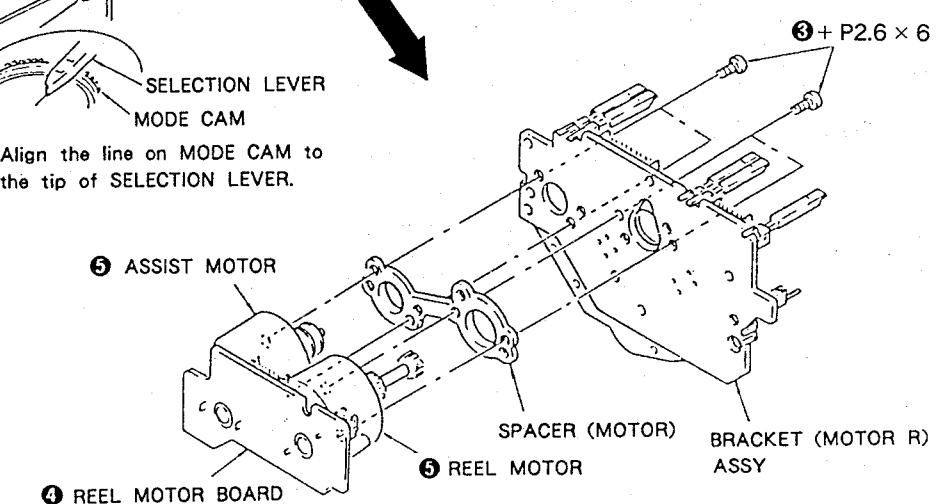
**PINCH LEVER/HEAD****⑤ Removal of HEAD**

Turn MOTOR PULLEY by a finger in the direction of arrow A and confirm that HEAD has turned in the direction of arrow B.

**CAPSTAN MOTOR/FLYWHEEL****REEL and ASSIST MOTORS**

Align Δ-mark to the line when reassembling.  
Align BOSS of MODE CAM to the point when reassembling.

Hook BELT here temporarily when reassembling.  
Align the line on MODE CAM to the tip of SELECTION LEVER.

**⑤ ASSIST MOTOR**

### SECTION 3 MECHANICAL ADJUSTMENTS

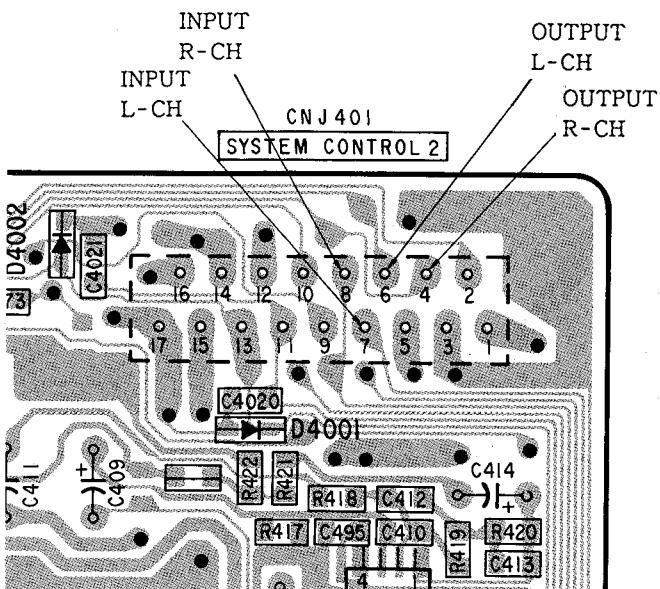
**PRECAUTION**

1. Clean the following parts with a denatured alcohol-moistened swab:
 

record/playback head	pinch roller
erase head	rubber belts
capstan	idle
2. Demagnetize the record/playback head with a head demagnetizer.  
(Head demagnetizer do not approach for the erase head.)
3. Do not use a magnetized screwdriver for the adjustment.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

**Torque Measurement**

Torque	Torque meter	Meter reading
Forward	CQ-102C	30 to 60g·cm (0.42 to 0.83 oz·inch)
Forward back tension	CQ-102C	1 to 5g·cm (0.014 to 0.069oz·inch)
Reverse	CQ-102RC	30 to 60g·cm (0.42 to 0.83oz·inch)
Reverse back tension	CQ-102RC	1 to 5g·cm (0.014 to 0.069oz·inch)
Forward, Reverse	CQ-201B	65 to 90g·cm (0.9 to 1.25 oz·inch)

**LINE IN/OUT Terminal (CNJ401)**

### SECTION 4 ELECTRICAL ADJUSTMENTS

**PRECAUTION**

1. The adjustment should be performed in the publication.  
(Be sure to make playback adjustment at first.)
2. The adjustment and measurement should be performed for both L-CH and R-CH.
  - Switch position
  - DOLBY NR switch : OFF
  - DIR MODE switch :  $\Rightarrow$

**Test Tape**

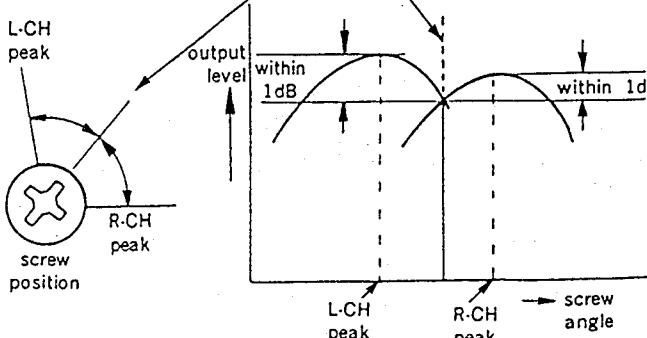
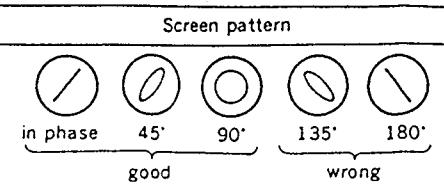
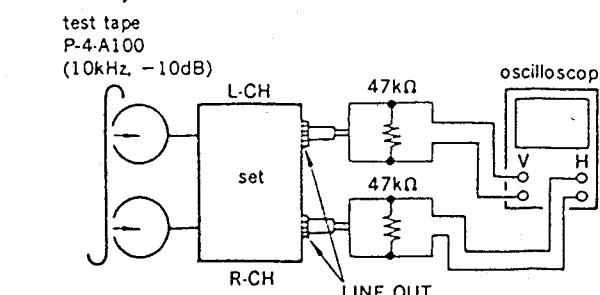
Tape	Contents	Use
P-4-A100	10kHz, -10dB	Azimuth Adjustment
P-4-L300	315Hz, 0dB	Level Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment

**Record/Playback Head Azimuth Adjustment****Procedure:**

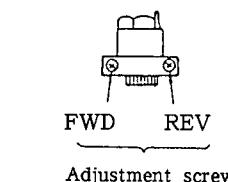
1. Forward Playback Mode
 

test tape  
P-4-A100  
(10kHz, -10dB)

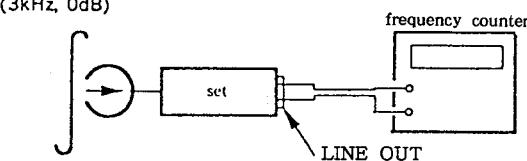
2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1dB.

**3. Playback Mode**

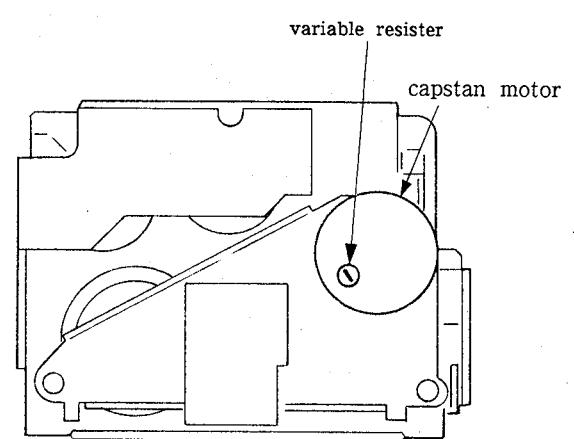
4. Change the reverse playback mode and repeat the steps 1 to 3.
5. After the adjustment, lock the adjustment screw with suitable locking compound.

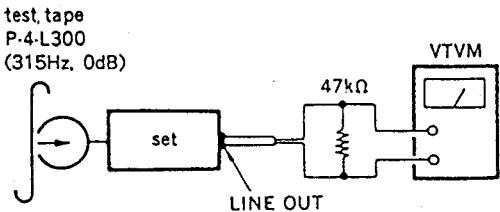
**Adjustment Location : - record/playback head -****Tape Speed Adjustment****Procedure:****-Forward Playback Mode-**

test tape  
WS-48B  
(3kHz, 0dB)



1. Set to FWD playback mode.
2. Adjust motor rear side (variable resistor) so that the frequency counter reading becomes  $3,000 \pm 15\text{Hz}$ .

**Adjustment Location : - capstan motor -**

**Playback Level Adjustment****Procedure :****-Forward Playback Mode-**

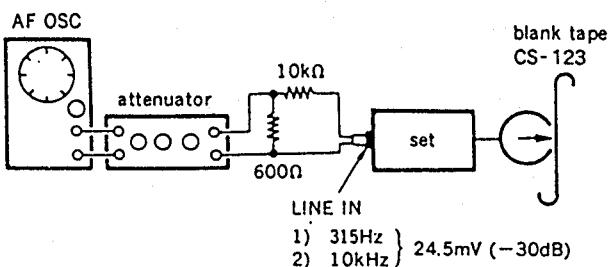
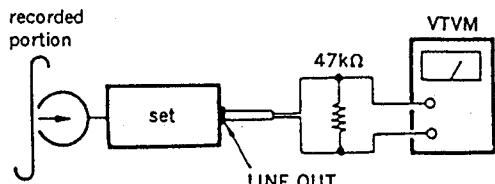
Adjustment RV101 (L-ch) and RV201 (R-ch) so that the reading on VTVM meets the adjustment limits below.

**Adjustment Limit :**

LINE OUT level :  $-10 \pm 0.5\text{dB}$  (0.23 to 0.26V)

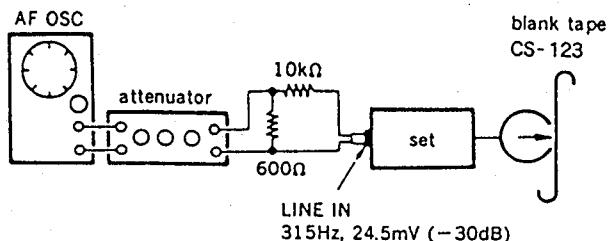
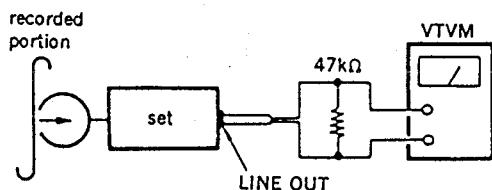
Level Difference between Channels: within 0.5dB

Confirm the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

**Record Bias Adjustment****Procedure :****1. Record Mode****2. Playback Mode**

Playback the signal recorded in step 1.

Confirm that the 10kHz playback output is  $0 \pm 0.5\text{dB}$  relative to the 315Hz output. If necessary, adjust RV103 (L-CH), RV203 (R-CH) and repeat the steps given above.

**Record Level Adjustment****Procedure :****1. Record Mode****2. Playback Mode**

Confirm playback the tape recorded become adjustment level as follows.

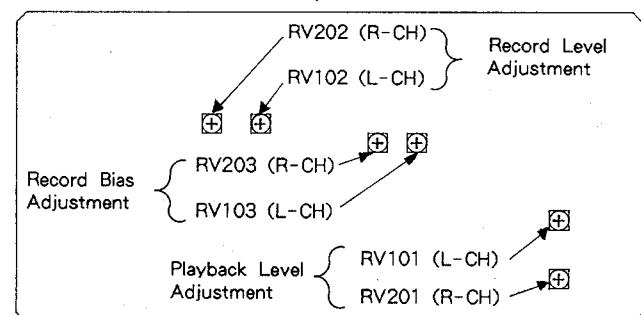
If necessary, adjust RV102 (L-CH), RV202 (R-CH) and repeat steps 1 and 2.

**Adjustment Limits :**

LINE OUT level :  $-30 \pm 0.5\text{dB}$  (23 to 26mV)

**Adjustment Location :**

**[MAIN (B) BOARD] - component side -**



## SECTION 5 DIAGRAMS

### 5-1. IC PIN DESCRIPTION

IC601 display microprocessor HD614023FA89

Fluorescent lamp indicator is activated by receiving data from IC702 (system controller).

Pin	Pin Name	I/O	Description
1~11 12 13 14~25 26	k-a VDISP Vcc	O — I —	FL indicator tube(FL601)segment output. Not used(+5.6 V). Power supply for activating the FL indicator tube(-22 V). Not used(GND). Power supply terminal(+5.6 V).
27 28 29 30 31 32~35	CLK DATA SYNC SAF	I I I O O	Data transmission clock input from IC702(system controller). Serial data input from IC702(system controller). Sync signal input which indicates the first byte of data sent from IC702(system controller). Not used(GND). LED(D601)light output in the AUTO REL LEVEL. Not used.
36~42 43 44 45 46	RESET TEST OSC1 OSC2	I I I O	Not used(GND). Reset input from IC702(system controller). "L": Reset. Not used(+5.6V). Clock input(4.19MHz). Clock output.
47 48~50 51 52 53~57	GND	—	Power supply terminal(GND). Not used(GND). Not used(Pull-up). Not used. FL indicator tube(FL601)grid output.
58~59 60~64	1G~5G p-1	O O	Not used. FL indicator tube(FL601)segment output.

IC406 selector controller M50760-315FP

AV output is switched with the audio bus signal sent from the amplifier (TA-H5600).

Pin	Pin Name	I/O	Description
1 2 3 4 5	D3 A0 A1 CNVs	I O O —	Model selection input port. Connected to GND. Audio IN switch(IC403 and IC404)control output port. Not used. Audio IN switch(IC403 and IC404)control output port. Power supply terminal(GND).
6 7 8 9 10	Vss A2 B0 B1	— O O O	Power supply terminal(GND). Audio IN switch(IC403 and IC404)control output port. Audio OUT switch(IC405)control output port. Audio OUT switch(IC405)control output port. Not used.
11 12 13~14 15	V0 V1	O O	Video IN/OUT switch(IC407)control output port. Video IN/OUT switch(IC407)control output port. Not used(GND). Not used.
16 17 18 19 20	RESET XOUT XIN S D0	I O I I I	Reset input. "L": Reset. Clock output. Clock input. Serial data input(audio bus). Serial data input(audio bus).
21 22 23 24	D1 D2 V <sub>DD</sub>	I I —	Model selection input port. Connected to +5 V(pull up). Not used. Model selection input port. Connected to GND. Power supply terminal(+5 V).

## IC702 system controller M50944-155SP

The system is wholly controlled by communication between IC601 (display microprocessor) and IC701 (mechanism controller).

Pin No.	Pin Name	I/O	Description
1	VREF	I	A/D input port reference voltage input(+5.6 V).
2	MET - R	I	Level meter Rch input(analog) from the meter amplifier(IC305).
3	MET - L	I	Level meter Lch input(analog) from the meter amplifier(IC305).
4	VOL A/D	I	REC LEVEL VOLUME(RV301)position detect input(analog).
5		—	Not used.
6	KEY4	I	Key switch input(analog).
7	KEY3	I	Key switch input(analog).
8	KEY2	I	Key switch input(analog).
9	KEY1	I	Key switch input(analog).
10	SYNC	O	Sync signal output which indicates the first byte of data sent to IC601.
11	FL SK	O	Data transmission clock output to IC601.
12	FL SO	O	Serial data output to IC601.
13	AUB OUT	O	Audio bus output.
14	AUB IN	I	Audio bus output(negative edge).
15	POW IN	I	Not used(pull up).
16	PB SEL	O	Not used(open).
17	AMS SEL	O	Not used(open).
18	MD REQ	I	Data request input from IC701.
19	MD SCLK	O	Data transmission clock output to IC701.
20	MD SO	O	Serial data output to IC701.
21	MD SI	I	Serial data input from IC701.
22	RES OUT	O	Reset signal output to IC601.
23		—	Not used(open).
24	AUB IN	I	Audio bus input(positive edge).
25		—	Not used(open).
26	GND	—	Power supply terminal(GND).
27	RES	I	System reset input. "L": Reset.
28	XIN	I	Clock input(4 MHz).
29	XOUT	O	Clock output.
30,31		—	Not used(open).
32	Vss	—	Power supply terminal(GND).
33	φ	—	Not used(open).
34	TEST 2	I	Test mode setting input. This set enters into the test mode when the power is on and it is set to "L"(CNP703 is shortened)*1
35	TEST 1	I	Not used(GND).
36,37	VERSEL	I	Not used(+5.6 V).
38		—	Not used(open).
39	POW ON	I	Not used(GND).
40	VOL LED	O	Volume LED ON/OFF output. "L": light up.
41	VOL -	O	Volume motor(RV301)down control output for IC706.
42	VOL +	O	Volume motor(RV301)up control output for IC706.
43	VOL SPD	O	Volume motor speed control output. "H": SLOW, "L": FAST.
44~47		O	Not used(open).
48	BIAS 4	O	Tape bias select output. "L": Metal.
49	BIAS 2	O	Tape bias select output. "L": CrO2.
50	BIAS 1	O	Tape bias select output. "L": Normal.
51	RMUTE	O	REC mute control output.
52		O	Not used(open).
53	RELAY	O	Mechanism deck head switch control output. "L": Relay on.
54		O	Not used(open).

Pin No.	Pin Name	I/O	Description
55	B/C	O	Dolby B/C control output. "L": Dolby C, "H": Dolby B.
56	ON/OFF	O	Dolby ON/OFF control output. "C": ON, "H": OFF
57	REC/PB	O	Dolby amplifier REC/PB control output. "L": REC, "H": PB.
58	PB70μs	O	Playback equalizer characteristic switch output. "H": Normal, "L": CrO <sub>2</sub> or Metal.
59	AMS IN	O	Signal input from the AMS amplifier(IC304). With music: "H", No music: "L".
60	AMS/BS	O	Not used.
61	PASS	O	Not used(connect to ④ pin).
62	L MUTE	O	Line mute control output. "H": MUTE.
63	AVcc	O	Power supply terminal(+5.6 V).
64	Vcc	O	Power supply terminal(+5.6 V).

## \*1 Test mode

When the power is on and pin ④ is set to "L"(CNP703 is shortened.), the set enters the electrical adjustment test mode and the followings can be available.

## (2) Recording memory

Recording memory is set to ON when the tape counter is reset at the record start point.

## (1) Source monitor

Recording signals can be monitored through the LINE OUT terminal(see page 7) because the line short is removed in recording.

## IC701 mechanism controller M50747-B83SP

The mechanism deck is controlled by receiving data from IC702 (system controller).

Pin No.	Pin Name	I/O	Description
1	Vcc	—	Power supply terminal(+5.6 V).
2	BCTRQ	O	Assist motor torque control output. { "H": Large torque "L": Small torque }
3	SPEED	O	Not used(open).
4	TYPE 1	O	REC EQ select output. NORMAL tape: "H"
5	TYPE 2	O	REC EQ select output. CrO <sub>2</sub> tape: "H"
6~9		O	Not used.
10	REVTAB	I	REC switch(reverse:S1009)input. "H": When REC claw is broken.
11	70μs	I	70μs switch(S1008)input. "H": 70μs, "L": 120μs(time constant of playback EQ).
12	METAL	I	METAL switch(S1007)input. "H": METAL tape, "L": NORMAL or CrO <sub>2</sub> tape.
13	HALF	I	HALF switch(S1006)input. "L": When a tape is mounted.
14	S REEL	I	Supply reel base sensor(IC1001)input.
15	T REEL	I	Take-up reel base sensor(IC1002)input.
16,17		I	Not used(GND).
18		—	Not used(open).
19	SCLK	I	Data transmission clock input from IC702.
20	SO	O	Serial data output to IC702.
21	SI	I	Serial data input from IC702.
22	REQ	O	Data request output to IC702.
23~25		—	Not used(open).
26	INT	I	Not used(+5.6 V).
27	CN Vss	—	Power supply terminal(GND).
28	RES	I	Reset input. "L": Reset.
29	XIN	I	Clock input(4 MHz).
30	XOUT	O	Clock output.
31	φ		Not used.
32	Vss	—	Power supply terminal(GND).
33~50			Not used.

Pin No.	Pin Name	I/O	Description
51	ASSIST1	O	Head base is "H" when turned to the FWD direction.) *1
52	ASSIST2	O	Head base is "H" when turned to the RVS direction.) *1
53	REEL 1	O	Reel motor rotation control output. Reverse: "H" )*2
54	REEL 2	O	Reel motor rotation control output. Forward: "H" )*2
55	TQ1	O	Reel motor torque control output. PLAY: "H" )*3
56	TQ2	O	Reel motor torque control output. FF/REW: "H" )*3
57~60	CAM1-4	I	Rotary encoder input to detect the position of the head base of the mechanical block. *4
61	OPEN	I	OPEN switch(S1004)input. "L": When the cassette holder completely opens.
62	CLOSE	I	CLOSE switch(S1003)input. "L": When the cassette holder completely closed.
63	DOOR	I	DOOR switch(S1002)input. "L": When the cassette holder is driven from open to close state.
64	FWDTAB	I	REC switch (forward : S1005) input. "H": When REC claw is broken.

\*1

	STOP	Turn to FWD direction	Turn to RVS direction	STOP
ASSIST 1	L	H	L	H
ASSIST 2	L	L	H	H

\*2

	STOP	FWD/CLOSE	REV/OPEN	BRAKE
REEL 1	L	L	H	H
REEL 2	L	H	L	H

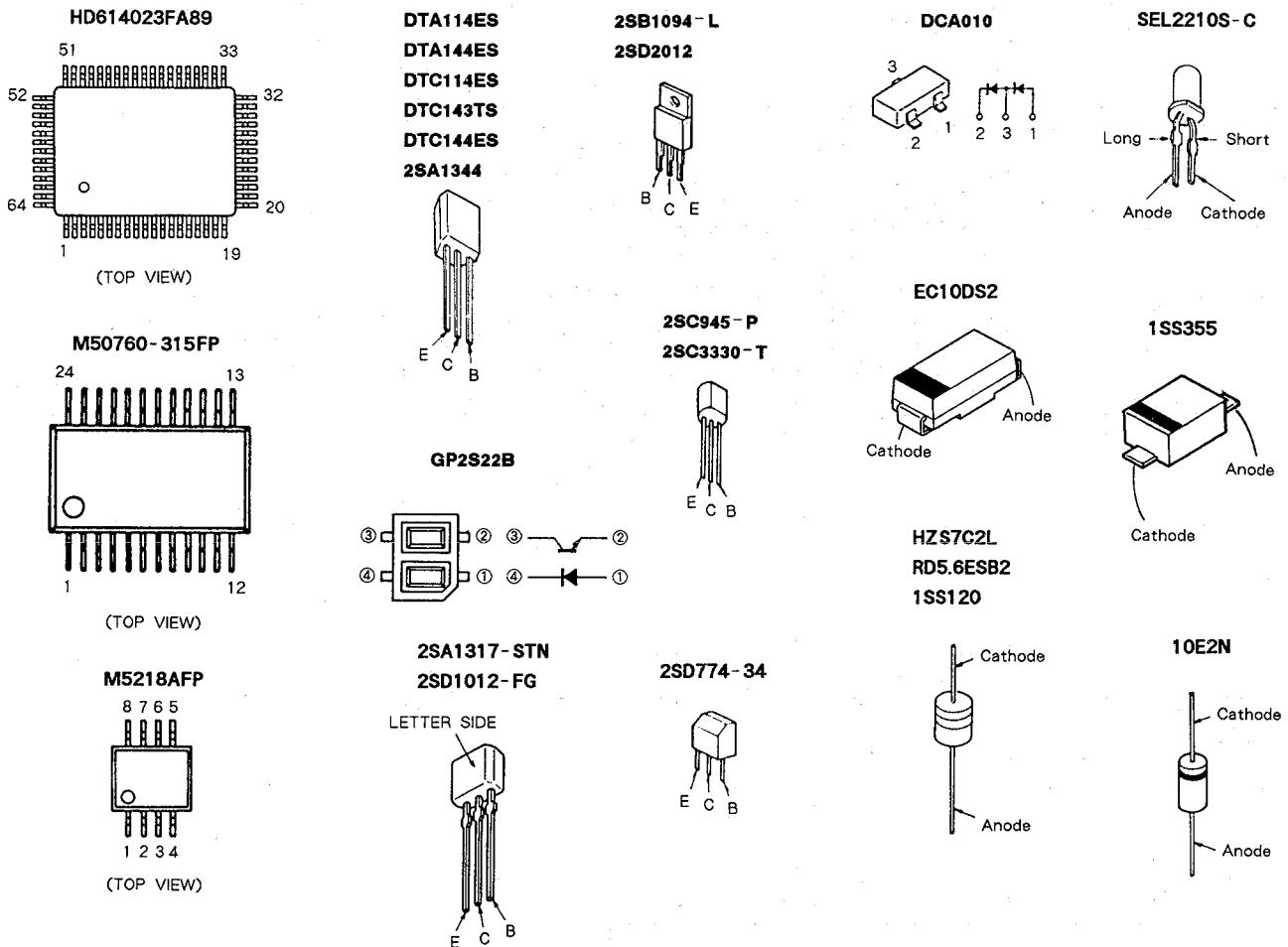
\*3

	OPEN/CLOSE (large torque)	FF/REW (medium torque)	PLAY (small torque)	INHIBIT
TQ 1	L	L	H	H
TQ 2	L	H	L	H

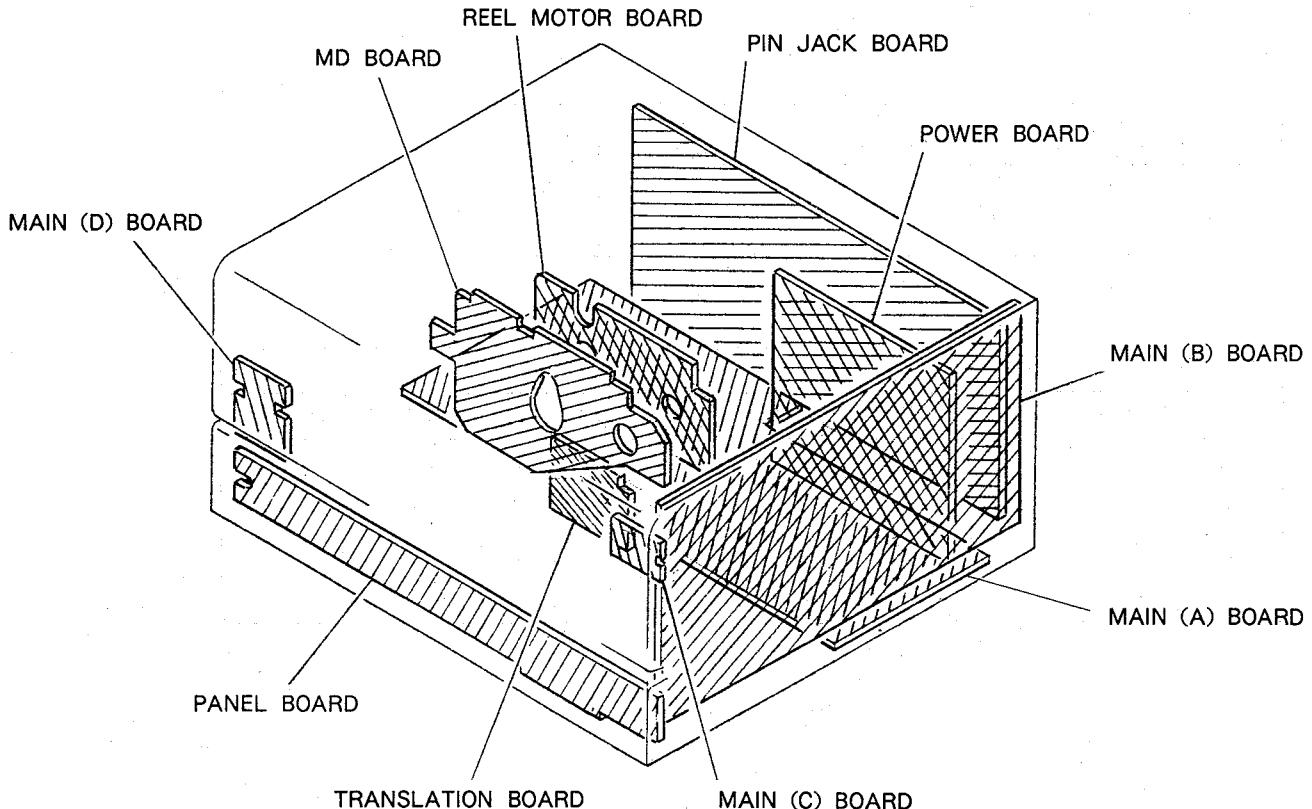
\*4

	Forward					Reverse				
	FWD PLAY	AMS/PAUSE	STOP	FF/REW	EJECT	FF/REW	STOP	AMS/PAUSE	RVS PLAY	
CAM1	H	H	L	H	L	H	L	H	H	
CAM2	H	L	H	H	L	H	H	L	H	
CAM3	H	H	H	H	H	L	L	L	L	
CAM4	H	H	H	L	L	L	H	H	H	

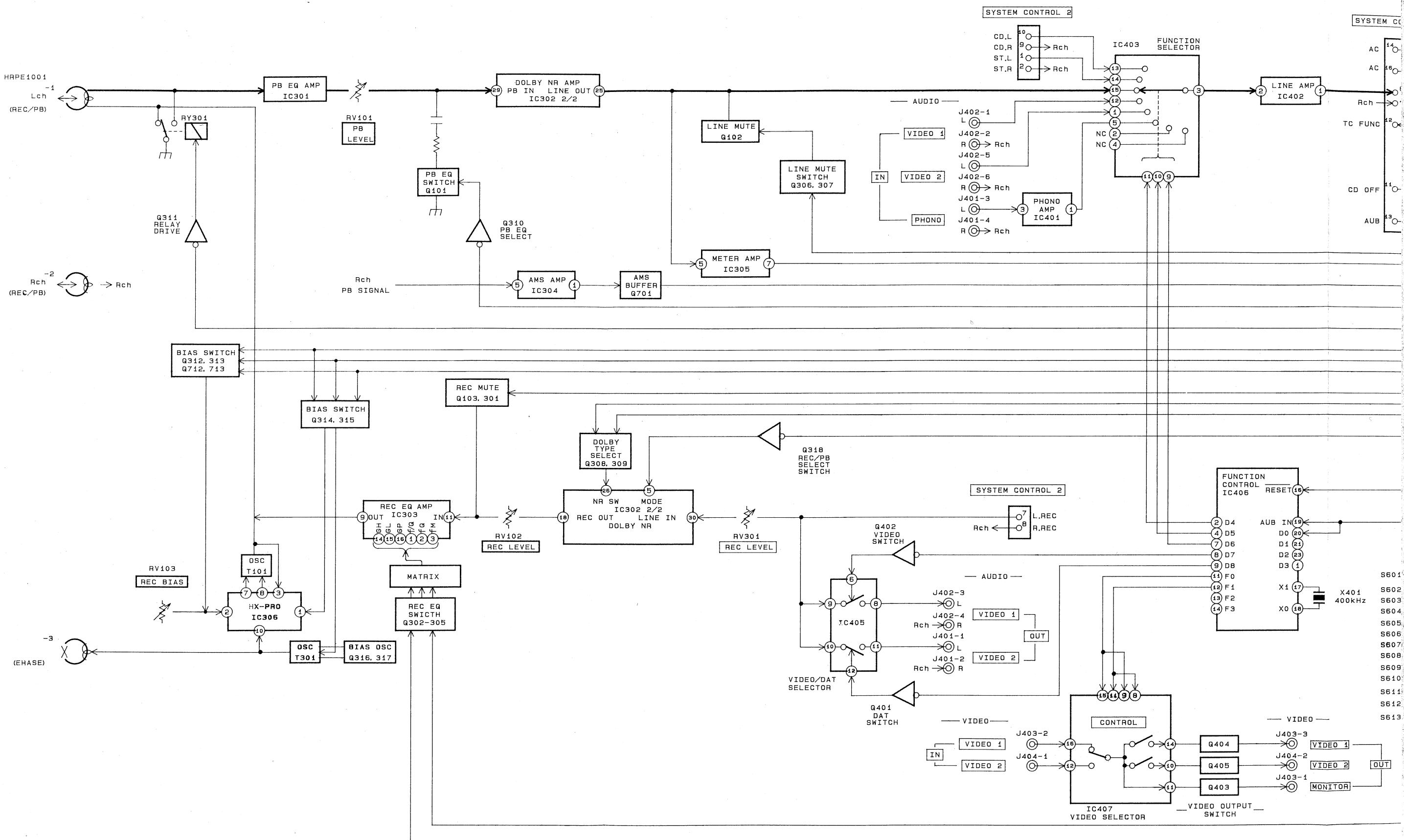
**5-2. SEMICONDUCTOR LEAD LAYOUTS**

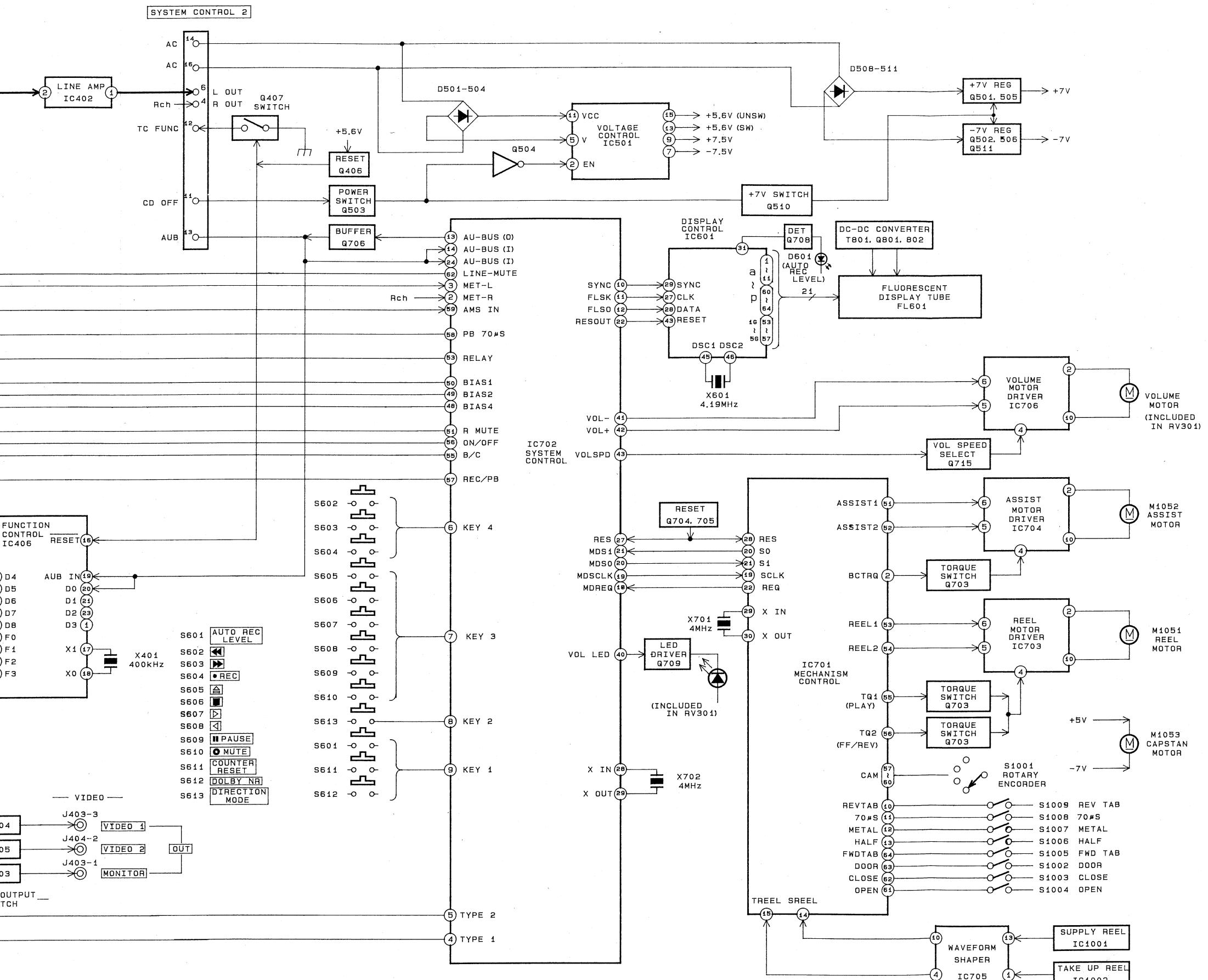


**5-3. CRICUIT BOARDS LOCATION**



#### 5-4. BLOCK DIAGRAM

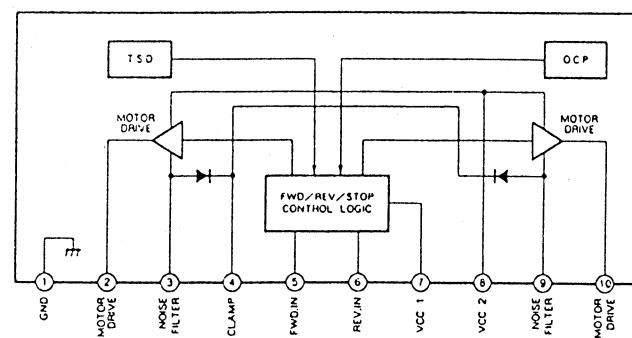




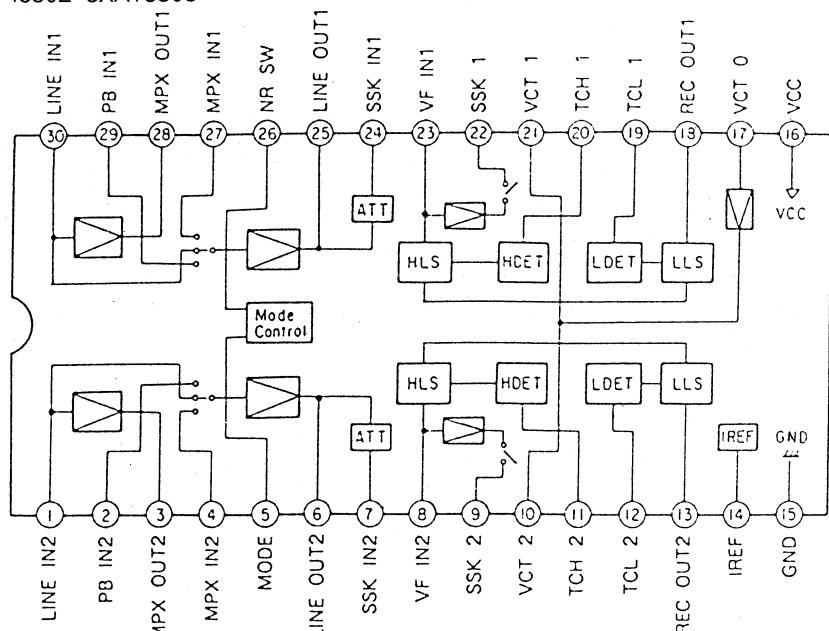
## • IC BLOCK DIAGRAM

IC703,706 BA6219B

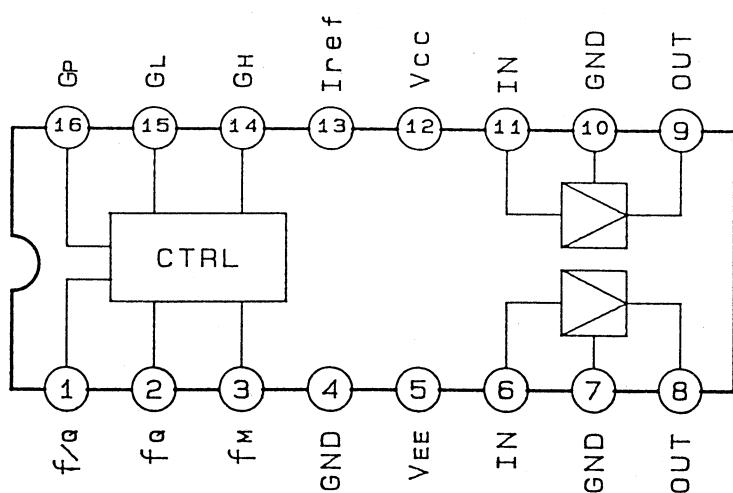
IC704 LB1641



IC302 CXA1330S



IC303 CXA1198AP

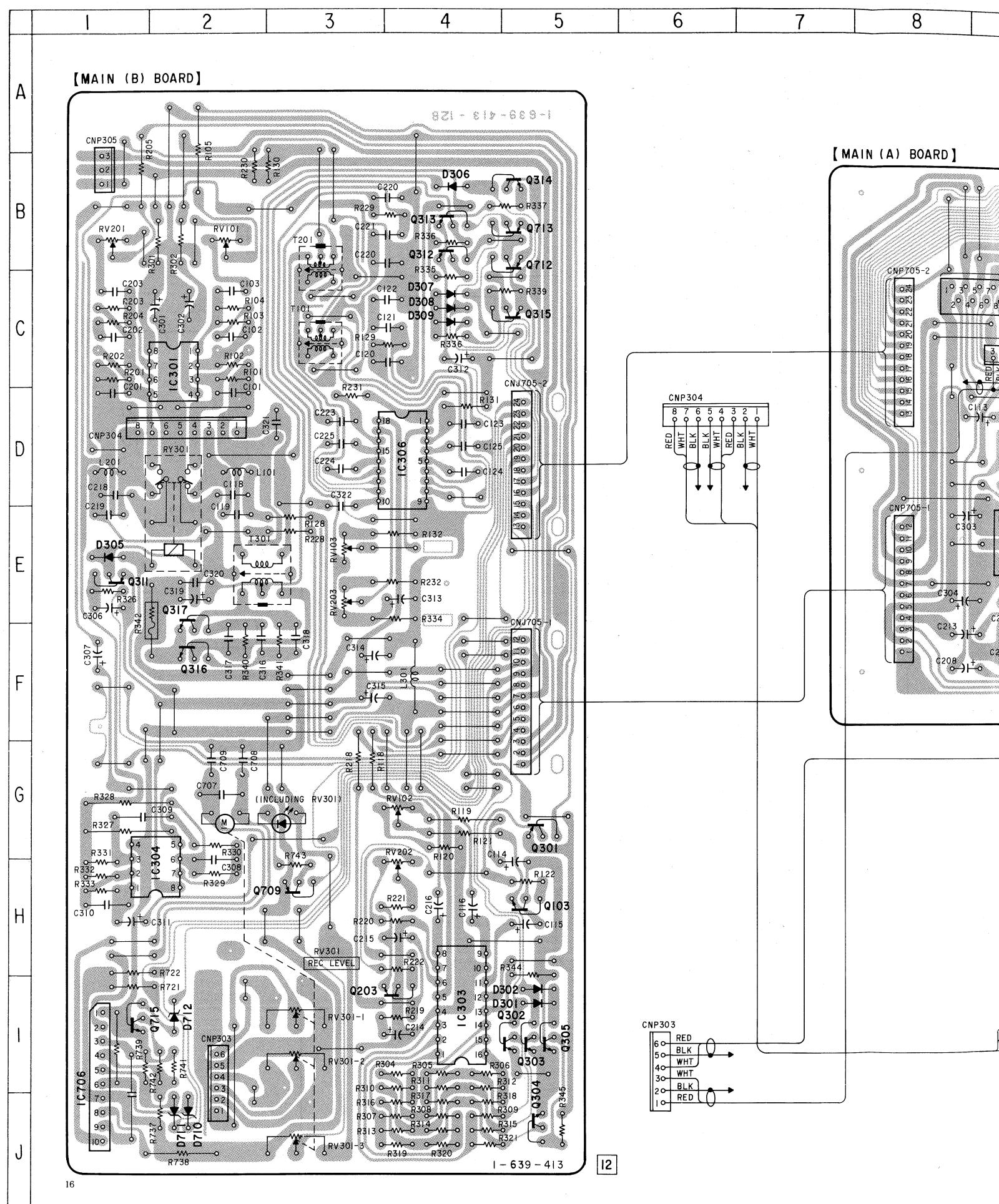


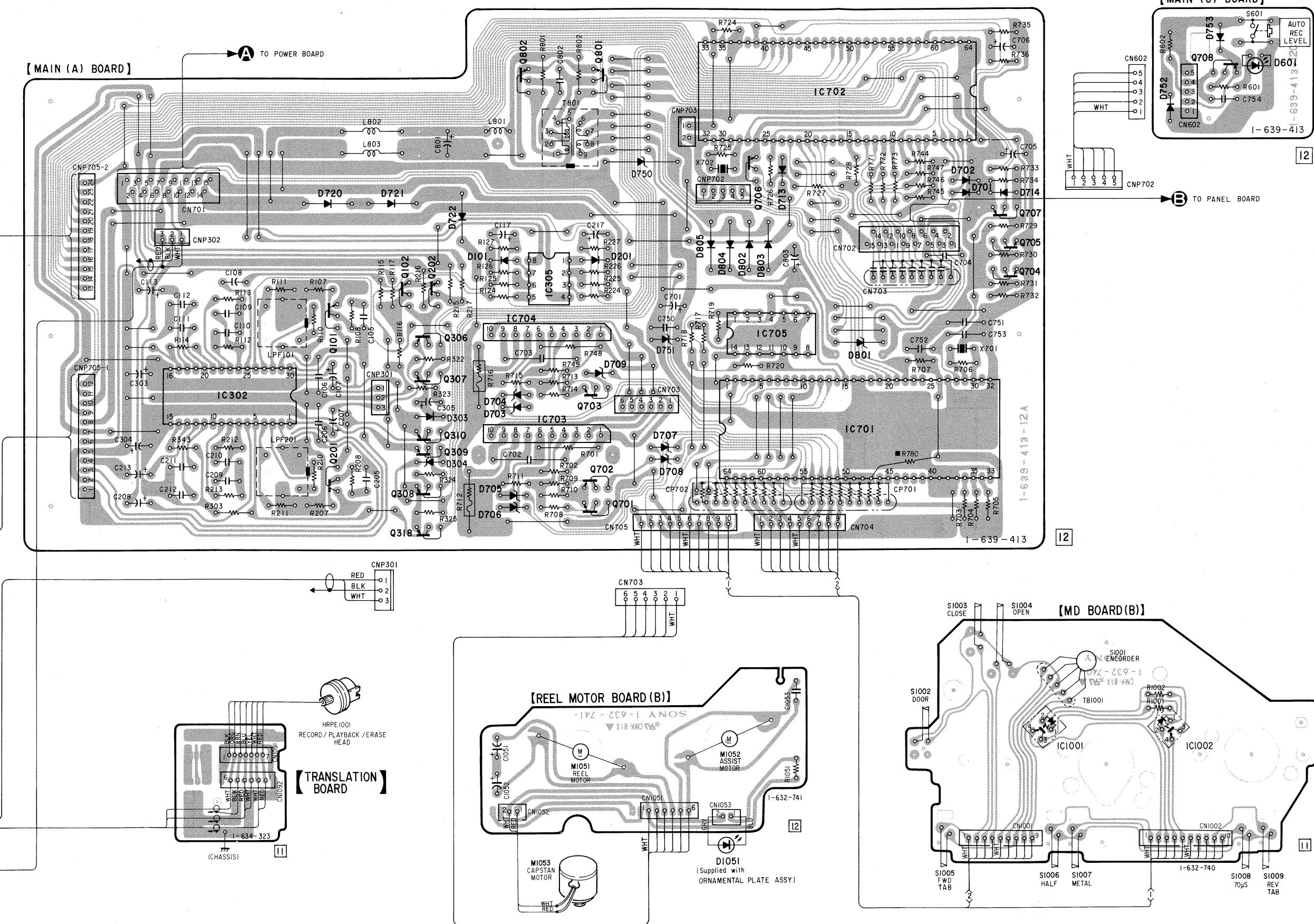
## • Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D101	C-12	Q306	D-11
D201	C-13	Q307	E-11
D301	I-5	Q308	F-11
D302	I-5	Q309	E-11
D303	E-11	Q310	E-11
D304	E-11	Q311	E-1
D305	E-1	Q312	B-4
D306	B-4	Q313	B-4
D307	C-4	Q314	B-5
D308	C-4	Q315	C-5
D309	C-4	Q316	F-2
D601	A-20	Q317	E-2
D701	C-17	Q318	F-11
D702	C-17	Q701	F-13
D703	E-12	Q702	F-13
D704	E-12	Q703	E-13
D705	F-12	Q704	D-17
D706	F-12	Q705	C-17
D707	E-14	Q706	C-15
D708	E-14	Q707	B-19
D709	E-13	Q708	H-3
D710	J-2	Q709	B-5
D711	J-2	Q712	B-5
D712	I-2	Q713	B-5
D713	C-15	Q715	I-1
D714	C-17	Q801	B-13
D720	C-10	Q802	B-11
D721	C-11		
D722	C-12		
D750	B-13		
D751	D-14		
D752	B-19		
D753	A-19		
D801	D-16		
D802	C-15		
D803	C-15		
D804	C-14		
D805	C-14		
IC301	C-2		
IC302	E-9		
IC303	I-4		
IC304	H-2		
IC305	D-13		
IC306	D-4		
IC701	E-16		
IC702	B-15		
IC703	E-13		
IC704	D-13		
IC705	D-15		
IC706	I-1		
IC1001	H-18		
IC1002	H-19		
Q101	D-10		
Q102	D-11		
Q103	H-5		
Q201	F-10		
Q202	D-11		
Q203	I-4		
Q301	G-5		
Q302	I-5		
Q303	I-5		
Q304	J-5		
Q305	I-5		

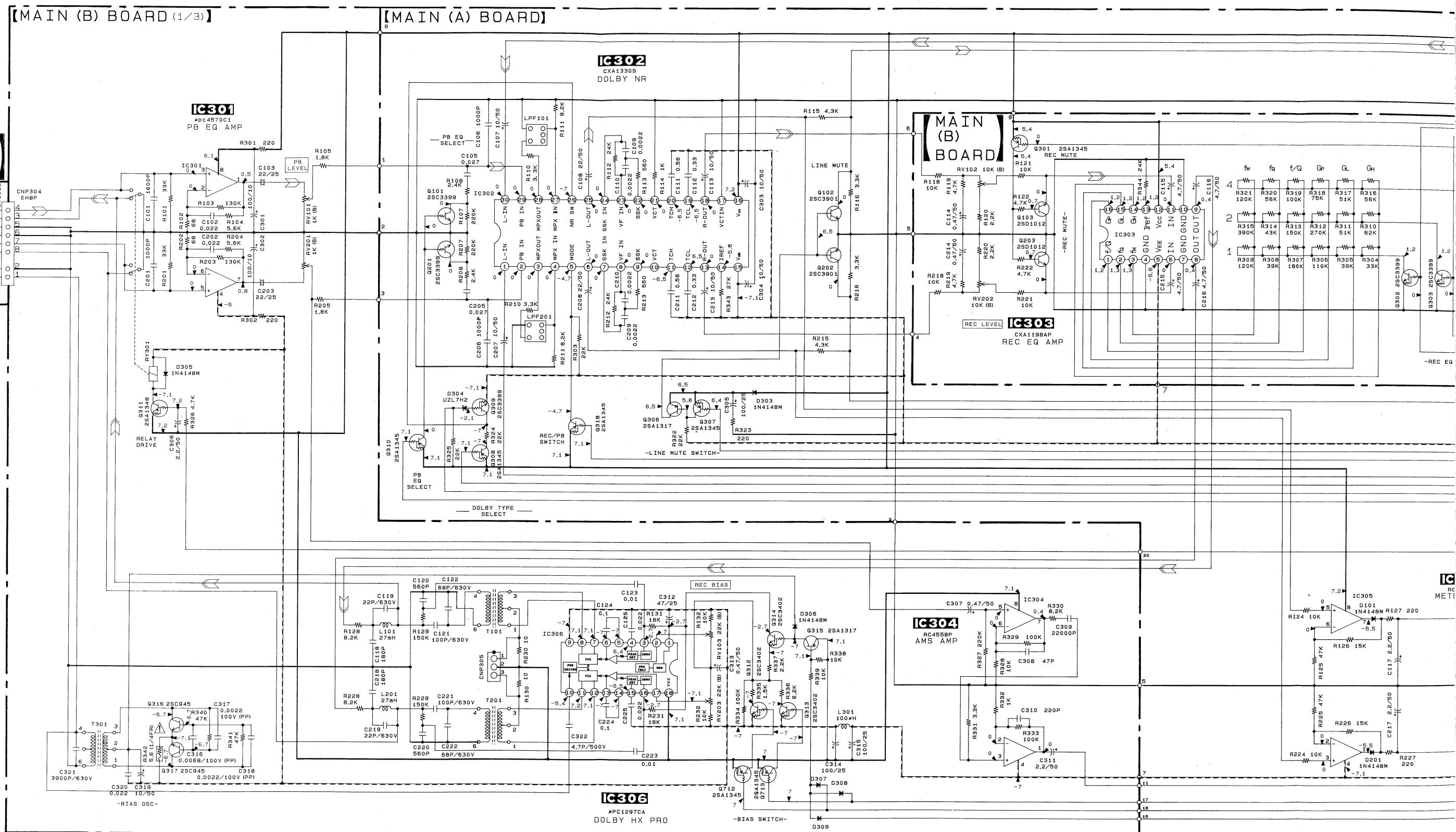
## Note on Mounting Diagram:

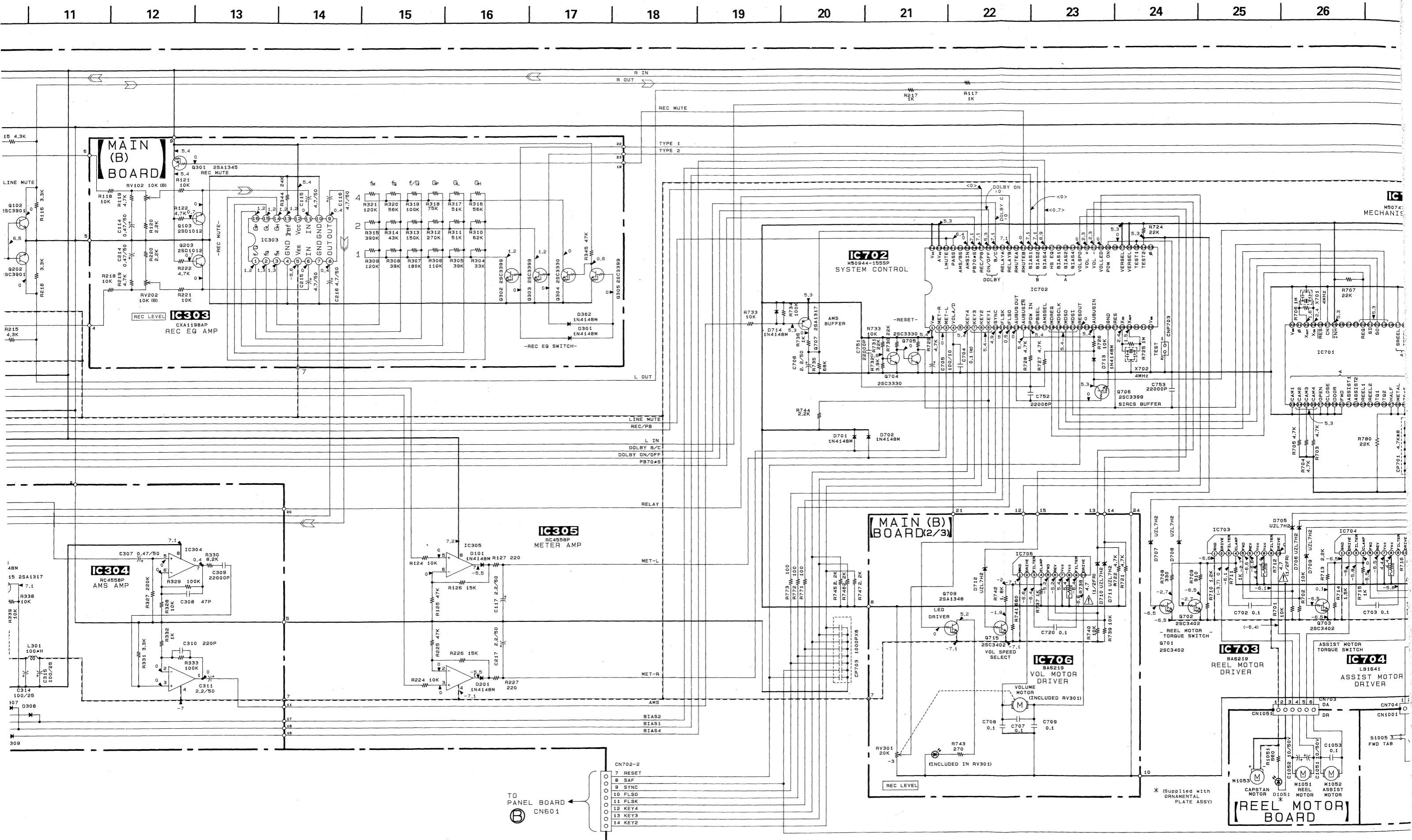
- : parts extracted from the component side.
- : parts mounted on the conductor side.





1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16





21

22

23

24

25

1

1

10

1

1

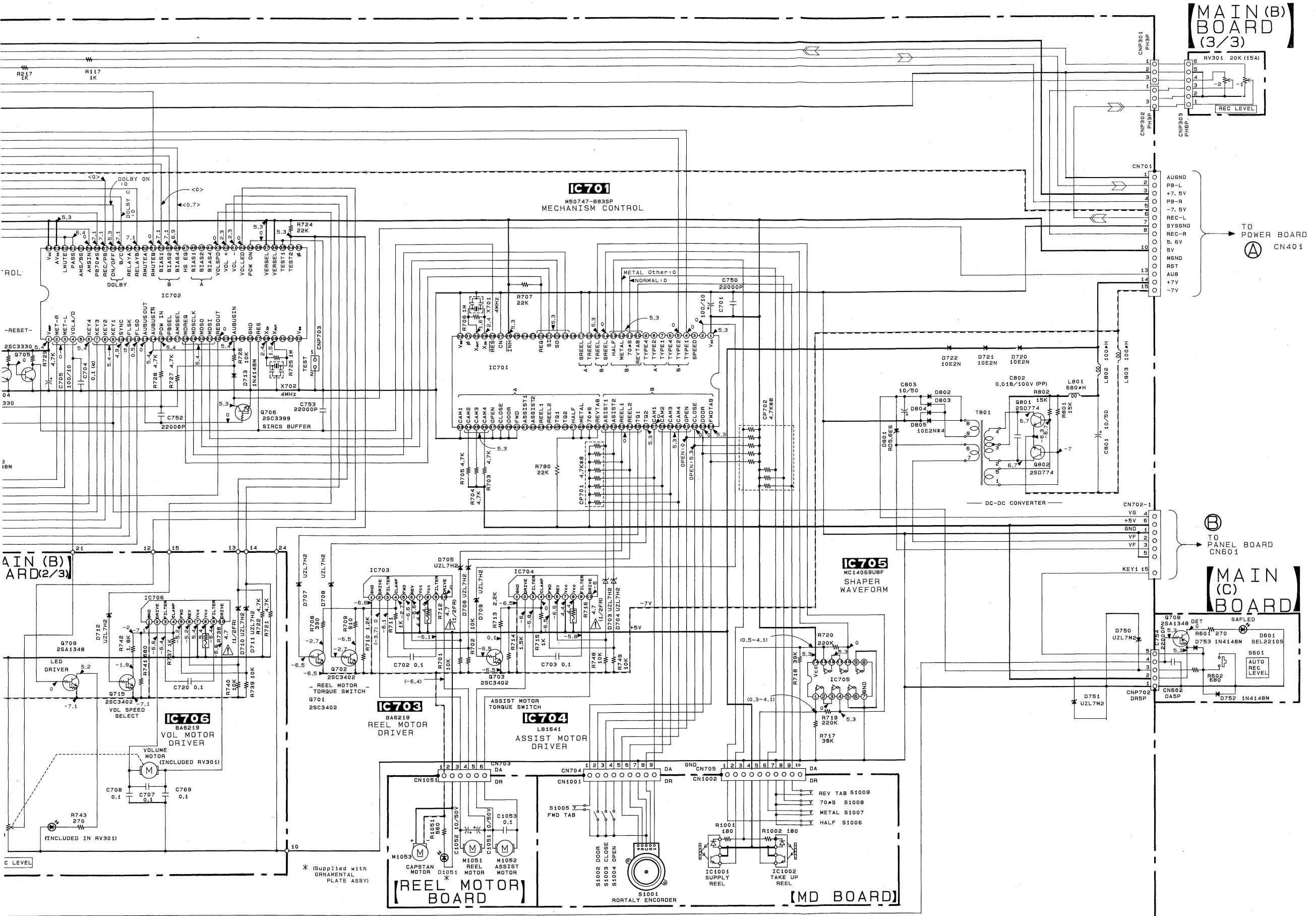
10

32

8

4

35

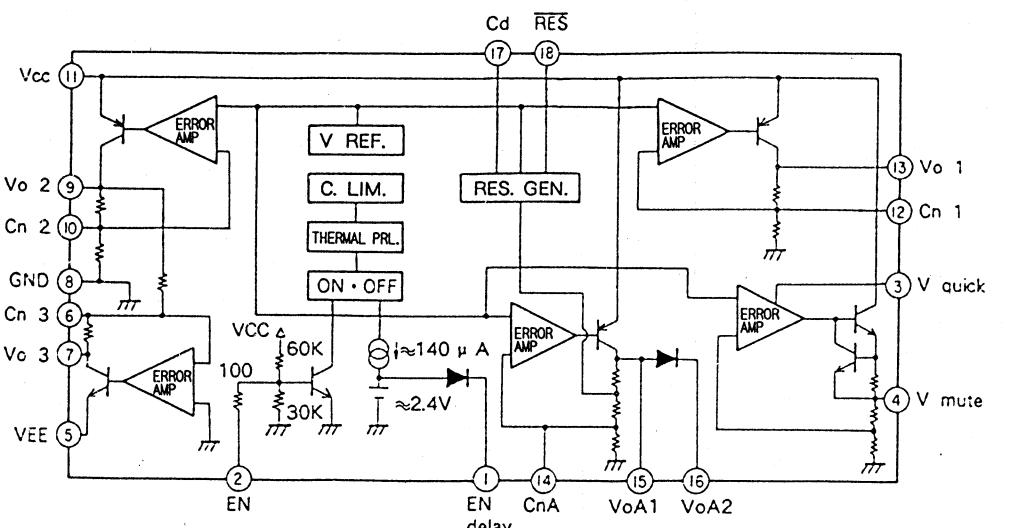


## 5-7. SCHEMATIC DIAGRAM - PIN JACK SECTION -

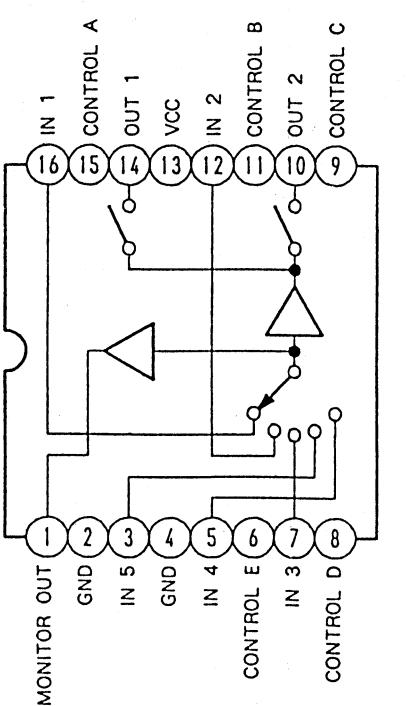
1 2 3 4 5

## • IC BLOCK DIAGRAM

IC501 LA5603



IC407 BA7625



## Note on Schematic Diagram:

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $1/4\text{W}$  or less unless otherwise specified.
- : fusible resistor.

## Note:

The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

- : B+ Line
- - : B- Line
- : adjustment for repair.

no mark: STOP

( ) : PB

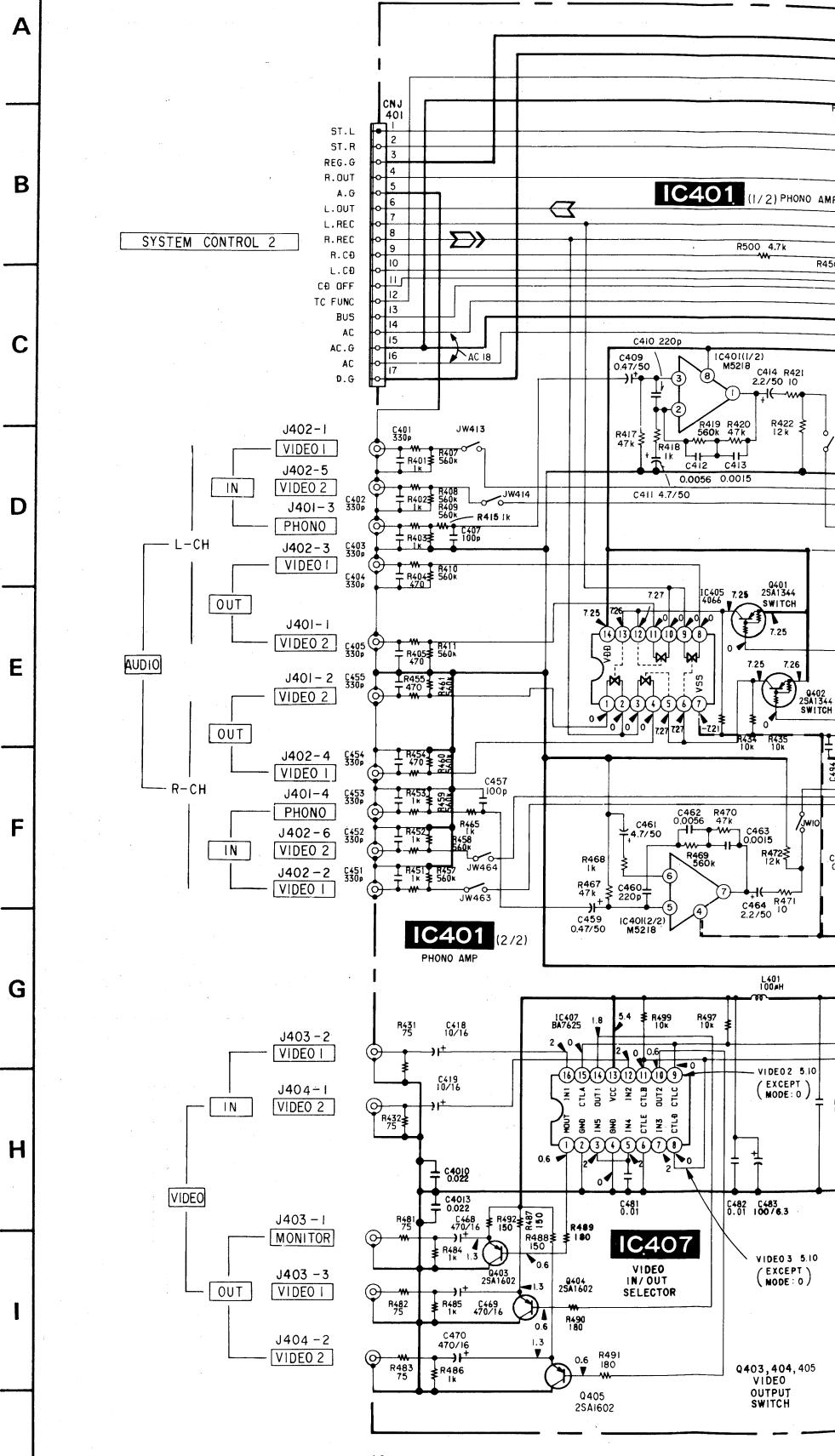
&lt; &gt; : REC

- Voltages are taken with a VOM ( $50 \text{ k}\Omega/\text{V}$ ).

Voltage variations may be noted due to normal production tolerances.

- Signal path.

## [PINE JACK BOARD]



## -7. SCHEMATIC DIAGRAM - PIN JACK SECTION -

1

2

6

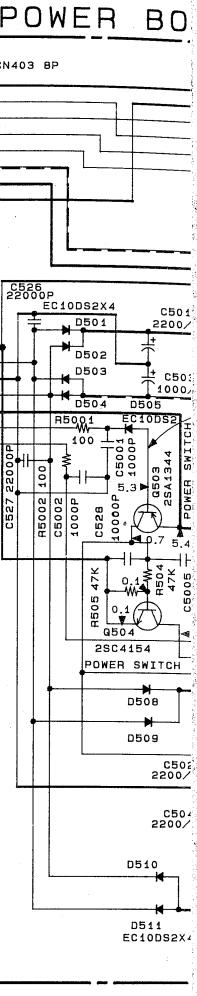
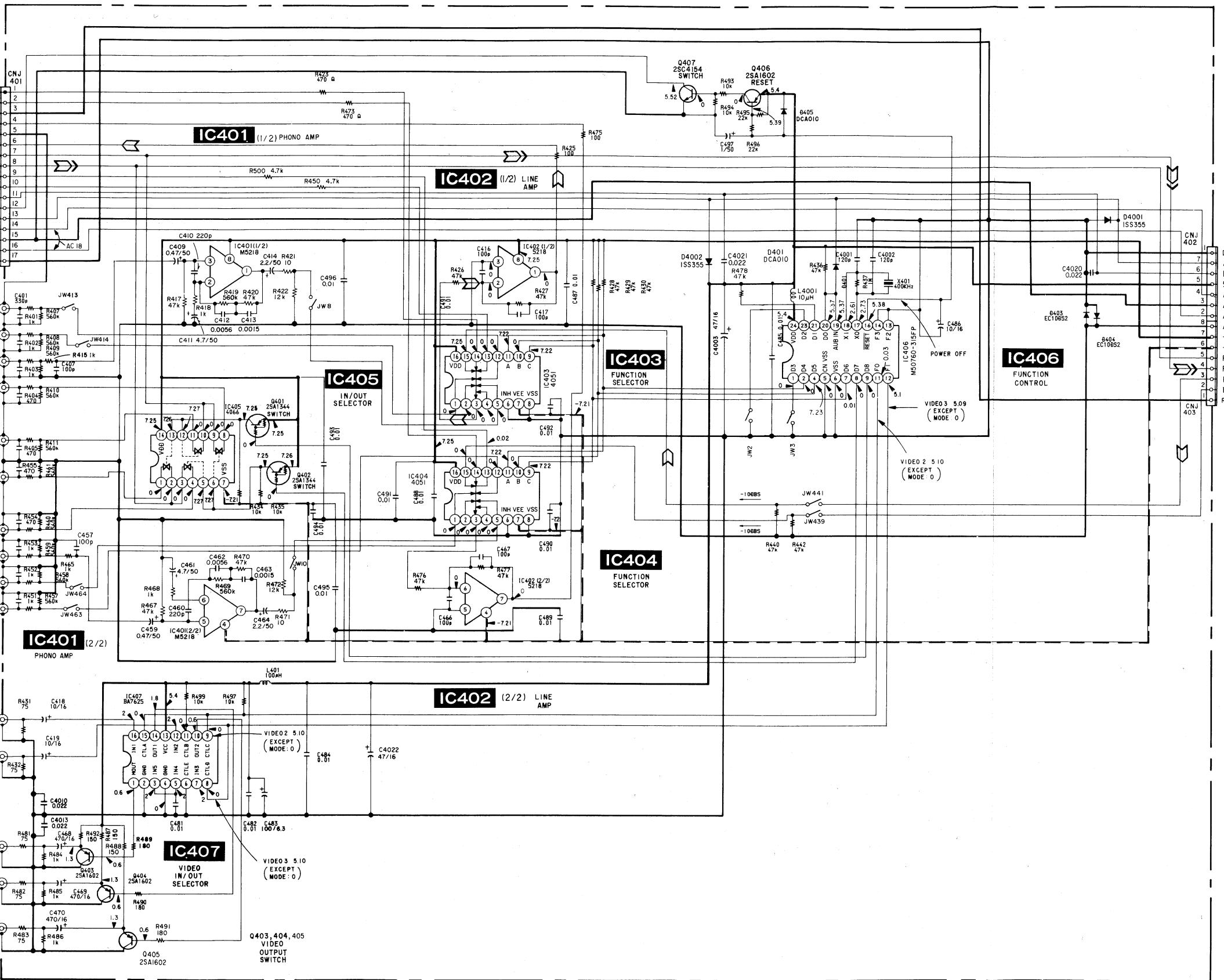
10

11

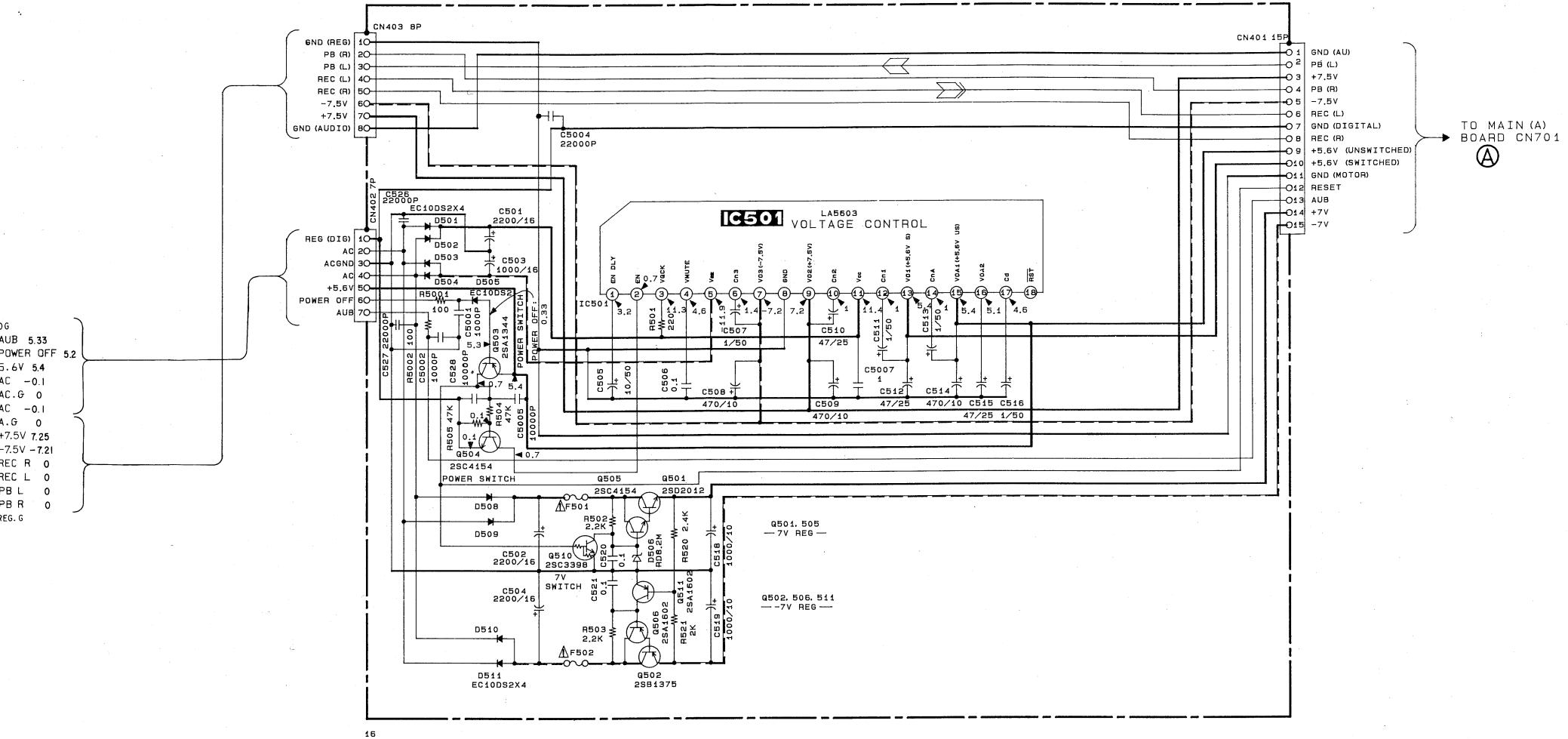
1

1

**[PINE JACK BOARD]**



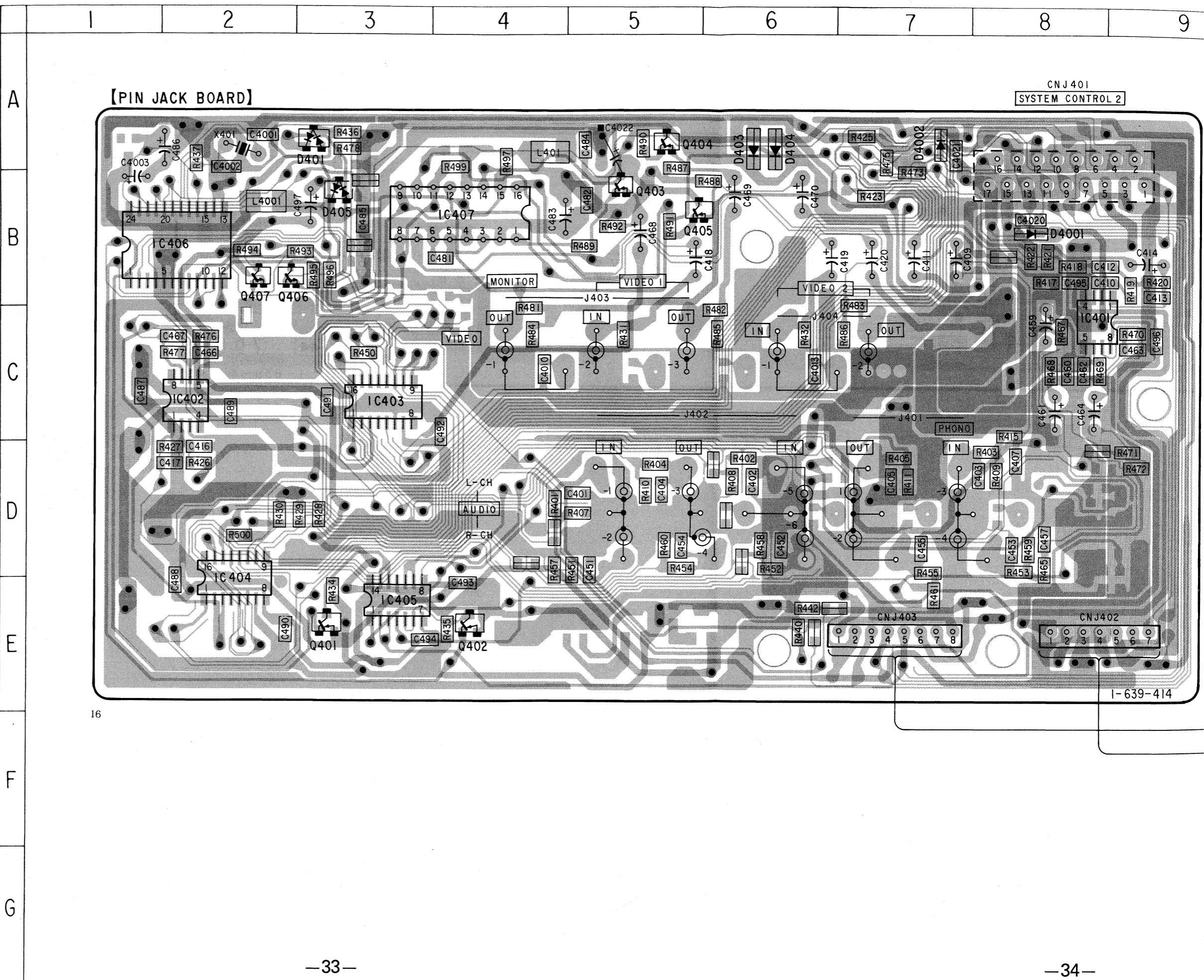
## POWER BOARD



→ TO MAIN (A)  
BOARD CN701

-32-

5-8. PRINTED WIRING BOARDS - PIN JACK SECTION -



8

9

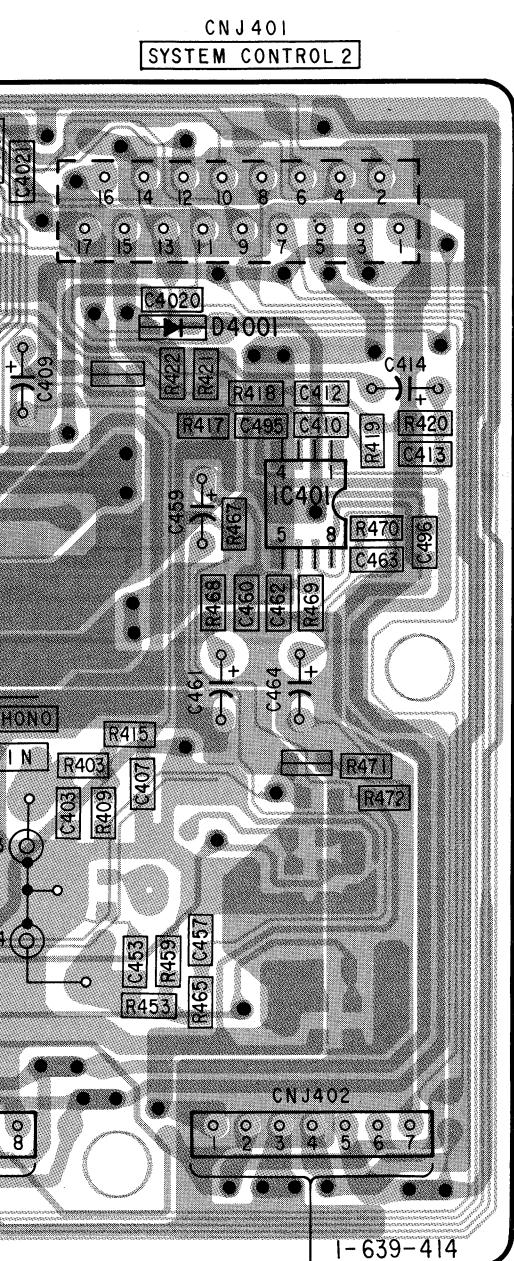
10

11

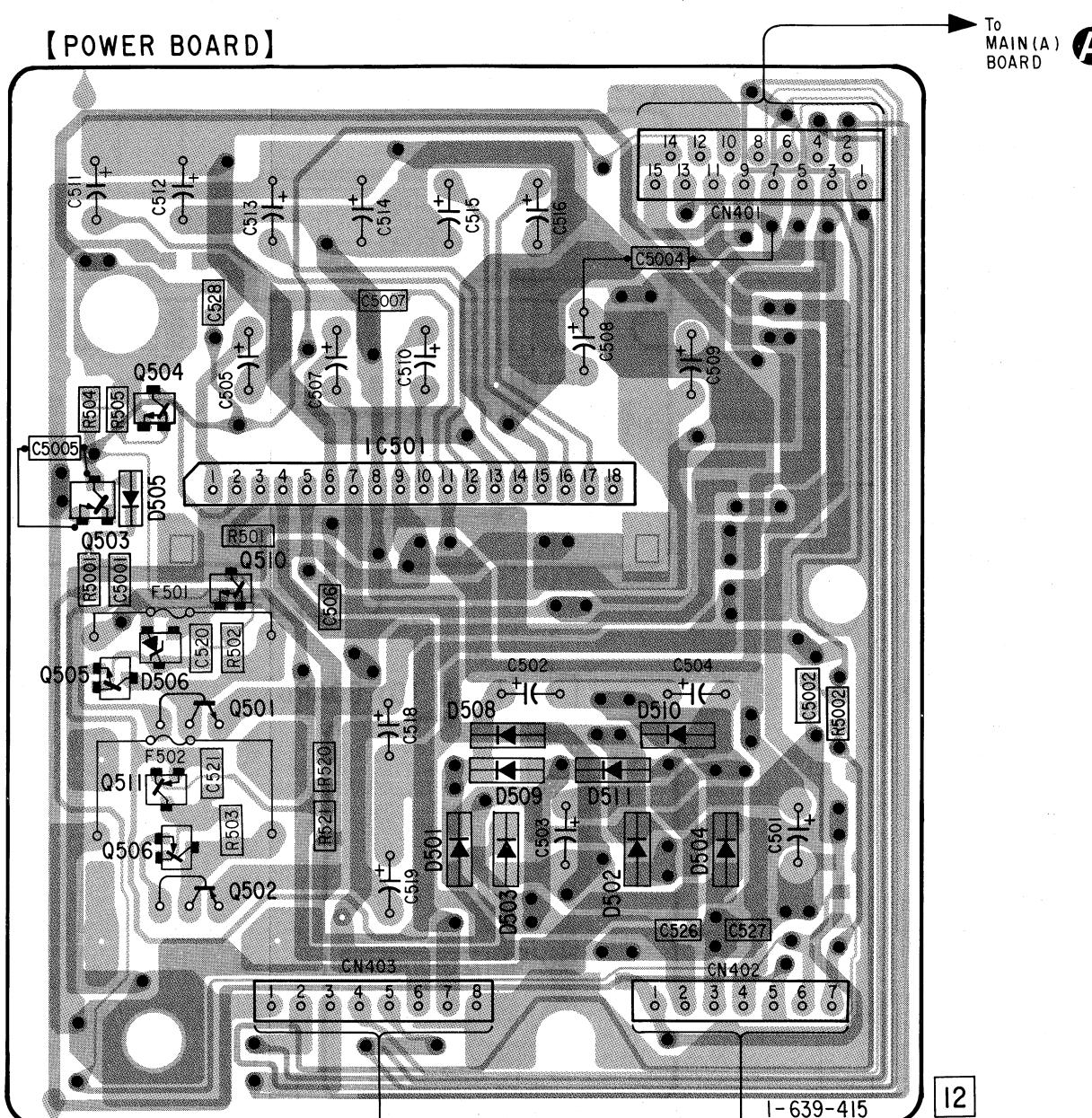
12

13

14



[POWER BOARD]



## • Semiconductor Location

Ref. No.	Location
D401	A-3
D403	A-6
D404	A-6
D405	B-3
D501	D-12
D502	D-13
D503	D-12
D504	D-13
D505	C-11
D506	C-11
D508	D-12
D509	D-12
D510	D-13
D511	D-12
D4001	B-8
D4002	A-7
IC401	C-8
IC402	C-2
IC403	C-3
IC404	E-2
IC405	E-3
IC406	B-2
IC407	B-4
IC501	C-12
Q401	E-3
Q402	E-4
Q403	B-5
Q404	A-5
Q405	B-5
Q406	B-2
Q407	B-2
Q501	D-11
Q502	D-11
Q503	C-10
Q504	B-11
Q505	D-10
Q506	D-11
Q510	C-11
Q511	D-11

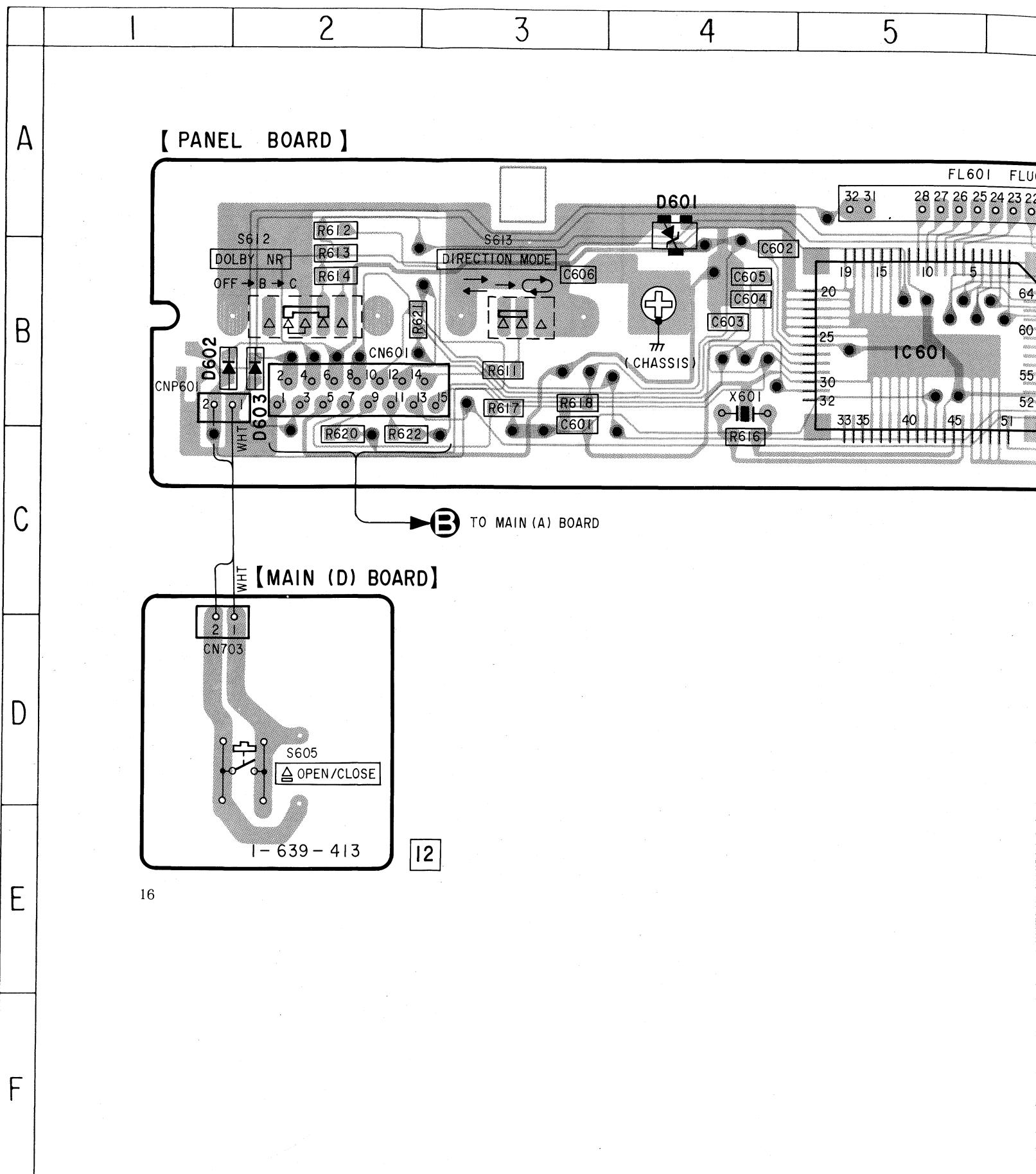
## Note on Mounting Diagram:

- ○ : parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- ● : Through hole.
- ▨ : Pattern on the side which is seen.
- ▨ : Pattern of the rear side.

## 5-9. PRINTED WIRING BOARDS - PANEL SECTION -

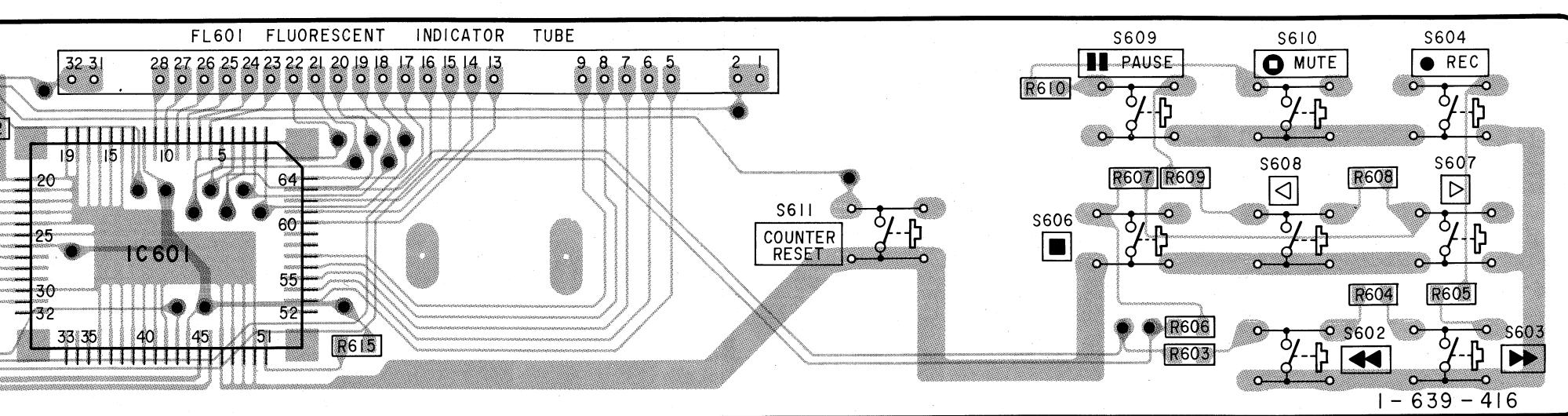
## • Semiconductor Location

Ref. No.	Location
D601	A-4
D602	B-1
D603	B-2
IC601	B-5



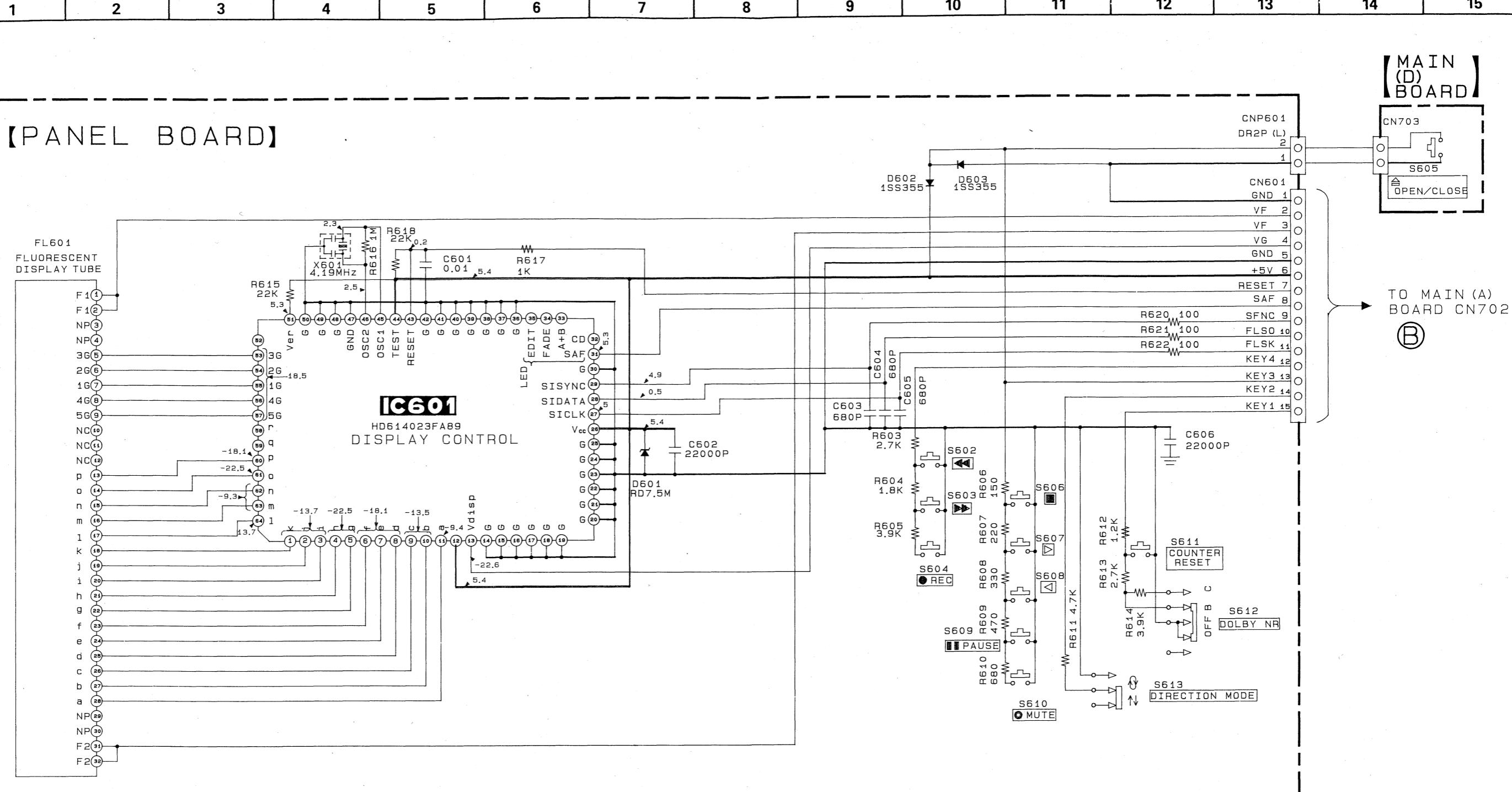
## Note on Mounting Diagram:

- : parts extracted from the component side.
- : Through hole.
- : Pattern on the side which is seen.
- : Pattern of the rear side.



12

## 5-10. SCHEMATIC DIAGRAM - PANEL SECTION - See page 28 for Note on Schematic Diagram.



## SECTION 6

### EXPLODED VIEWS

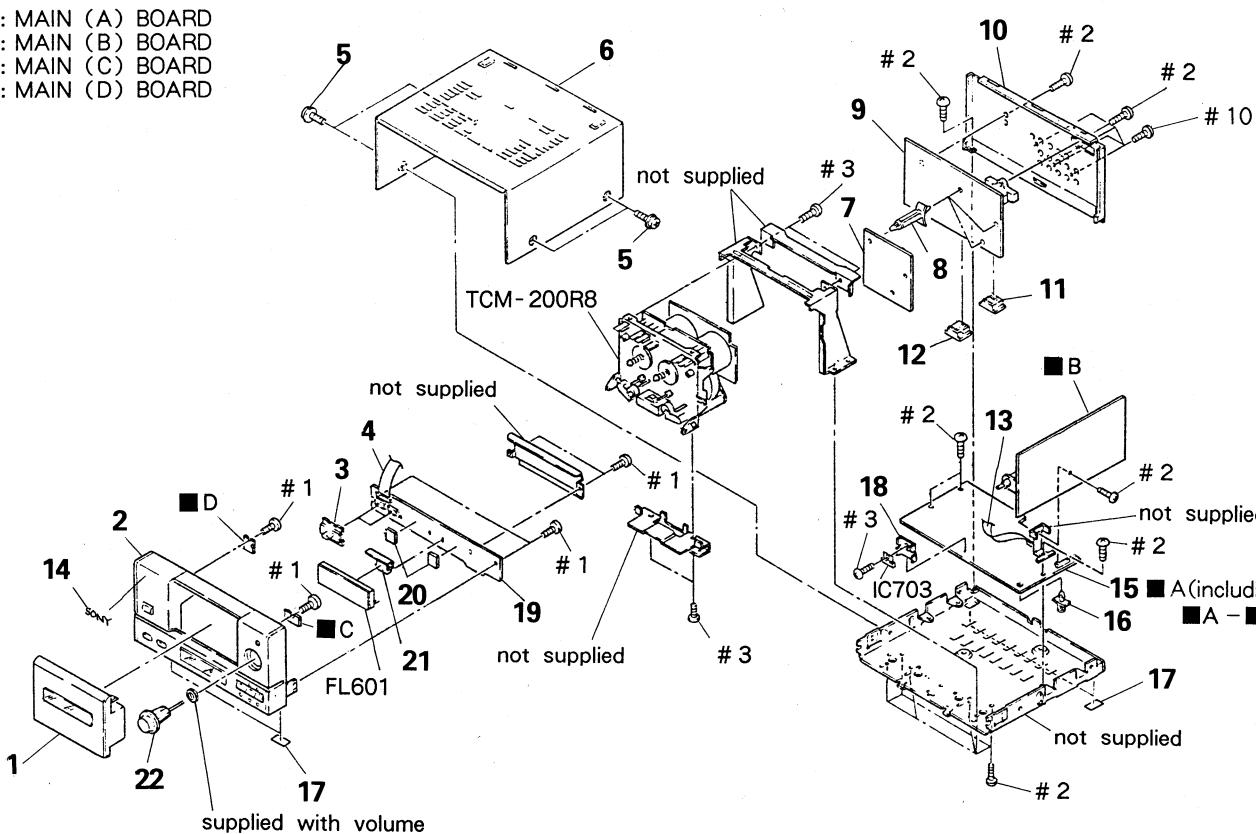
## NOTE:

- - XX, - X mean standardized parts, so they may have some differences from the original one.
  - Color Indication of Appearance Parts Example : KNOB, BALANCE (WHITE)...(RED)
- ↑                      ↑  
Parts color      Cabinet's color

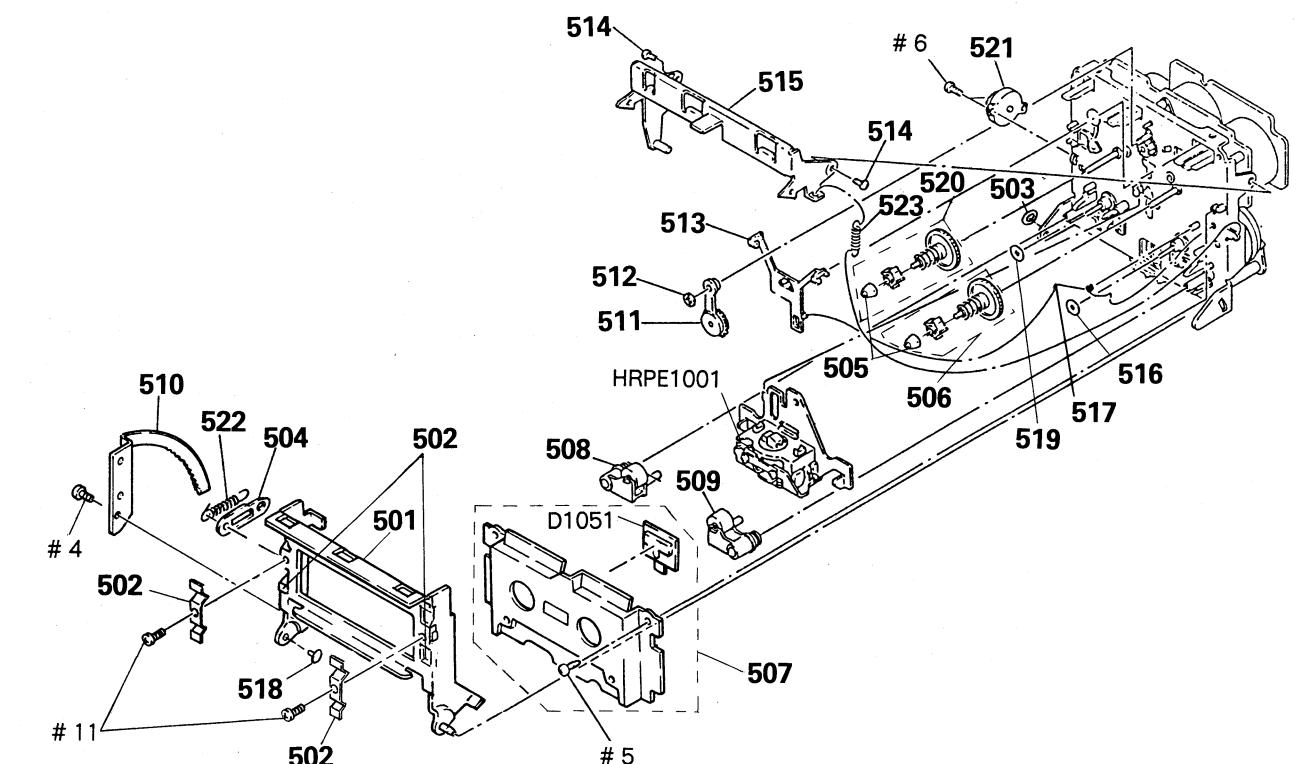
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

## 6-1. FRONT PANEL SECTION

■ A : MAIN (A) BOARD  
 ■ B : MAIN (B) BOARD  
 ■ C : MAIN (C) BOARD  
 ■ D : MAIN (D) BOARD

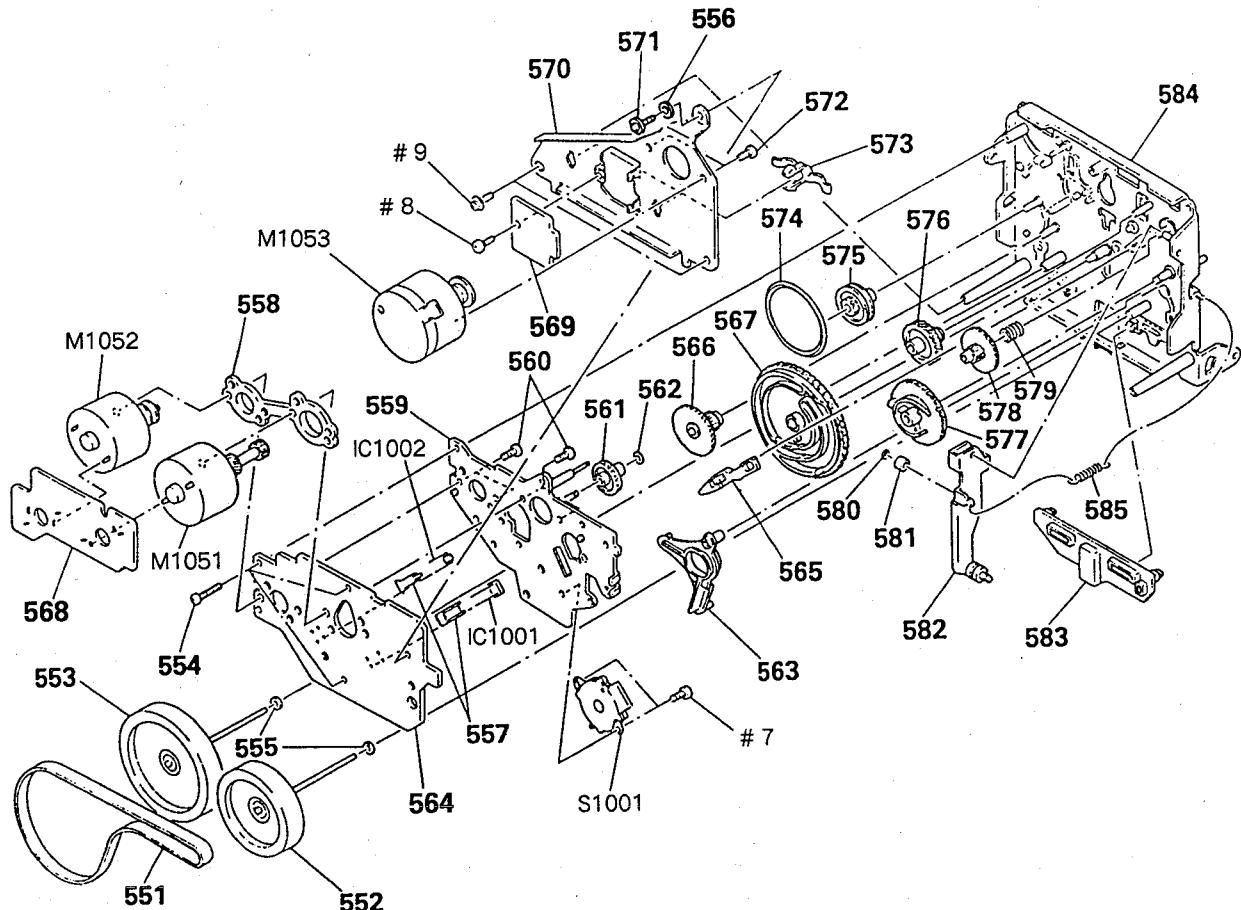


### 6-2. MECHANISM SECTION-1 (TCM-200R8)



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
1	A-2003-769-A	LID ASSY, CASSETTE		13	1-575-664-11	WIRE, FLAT TYPE (15 CORE)		501	X-3362-956-1	HOLDER ASSY, CASSETTE		514	3-356-601-11	SCREW, STEP	
2	A-2003-768-A	PANEL ASSY, FRONT		14	4-942-636-01	EMBLEM (NO. 3.5), SONY		502	3-354-908-01	SPRING (CASSETTE RETAINER)		515	* X-3356-608-1	LEVER (LIFTER) ASSY	
3	3-368-105-01	KNOB (SLIDE)		15	* A-2006-452-A	MAIN BOARD, COMPLETE		503	3-558-708-21	WASHER, STOPPER		516	3-356-713-01	WASHER	
4	1-575-906-11	WIRE, FLAT TYPE (15 CORE)		16	* 3-350-847-31	HOLDER, PCB		504	* 3-356-717-01	LEVER (JOINT)		517	3-356-619-01	SPRING (B), TORSION	
5	3-363-099-01	SCREW (CASE +3X8 TP2)		17	4-930-336-01	FOOT (FELT)		505	3-362-308-01	CAP (REEL)		518	3-356-710-01	SHAFT (LEFT) (CASSETTE HOLDER)	
6	4-932-841-01	CASE		18	* 3-356-925-01	HEAT SINK		506	X-3356-627-1	GEAR (T) ASSY		519	3-356-714-01	WASHER	
7	* 1-639-415-11	POWER BOARD		19	* A-2006-453-A	PANEL BOARD, COMPLETE		507	X-3356-613-1	PLATE ASSY, ORNAMENTAL		520	X-3356-628-1	GEAR (S) ASSY	
8	* 3-703-353-02	SUPPORT, PC BOARD		20	* 4-921-941-01	CUSHION (FL)		508	X-3343-455-1	LEVER (PINCH F) ASSY		521	3-712-786-01	DAMPER, OIL	
9	* A-2006-548-A	PIN JACK BOARD, COMPLETE		21	* 3-368-109-01	HOLDER, FL TUBE		509	X-3343-456-1	LEVER (PINCH R) ASSY		522	3-356-626-01	SPRING, TENSION	
10	* 3-367-074-01	PANEL, BACK		22	A-2003-767-A	KNOB (REC VOL) ASSY		510	X-3362-957-1	GEAR ASSY, LOADING		523	3-356-625-01	SPRING, TENSION	
11	* 1-573-188-11	CONNECTOR, BRIDGE 7P		FL601	1-519-656-11	INDICATOR TUBE, FLUORESCENT		511	X-3356-641-1	LEVER (FR2) ASSY		D1051	8-719-980-85	DIODE SLF-325C	
12	* 1-573-389-11	CONNECTOR, BRIDGE 8P		IC703	8-759-973-95	IC BA6219B		512	3-669-465-11	WASHER (1.5), STOPPER		HRPE1001	A-2003-772-A	BASE ASSY, HEAD	
								513	3-356-614-01	SLIDER (BRAKE)					

**6-3. MECHANISM SECTION-2  
(TCM-200R8)**



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
551	3-356-730-01	BELT (CAPSTAN R2)		571	3-356-707-01	SCREW (+PTPWH 2X25)	
552	X-3356-642-1	FLYWHEEL (R FWD) ASSY		572	4-885-599-00	SCREW, FITTING, REINFORCEMENT	
553	X-3356-643-1	FLYWHEEL (R REV) ASSY		573	3-575-321-00	RETAINER, THRUST, CAPSTAN	
554	3-355-801-01	SCREW (BTP 2X18)		574	3-356-603-01	BELT (MODE)	
555	3-356-705-01	WASHER (CAPSTAN)		575	3-356-607-01	PULLEY (MODE)	
556	* 3-356-718-01	SPACER (THRUST RETAINER R)		576	3-356-703-01	GEAR (COMMUNICATION C)	
557	3-356-631-01	HOLDER (SENSOR)		577	3-356-616-01	GEAR (LOADING CAM)	
558	* 3-356-628-01	SPACER (MOTOR)		578	3-356-609-01	GEAR (LOADING)	
559	* X-3356-602-4	BRACKET (MOTOR R) ASSY		579	3-356-605-01	SPRING, COMPRESSION	
560	3-363-804-01	SCREW (+P 2.6X6.5)		580	3-558-708-11	WASHER, STOPPER	
561	3-356-702-01	GEAR (COMMUNICATION B)		581	3-356-630-01	ROLLER (LOADING)	
562	3-669-465-00	WASHER (1.5), STOPPER		582	* X-3356-606-1	LEVER (LOADING) ASSY	
563	3-356-613-01	LEVER (MODE)		583	3-356-612-01	SLIDER (REVERSE)	
564	* 1-632-740-11	MD BOARD		584	X-3356-634-1	CHASSIS (R2)COMPLETE ASSY, MECH	
565	3-356-617-01	LEVER (SELECTION)		585	3-356-624-01	SPRING, TENSION	
566	3-356-606-01	GEAR (MODE)		IC1001	8-749-920-97	IC PHOTO REFLECTOR GP2S22B	
567	3-356-615-01	GEAR (MODE CAM RR)		IC1002	8-749-920-97	IC PHOTO REFLECTOR GP2S22B	
568	* 1-632-741-11	REEL MOTOR BOARD		M1051	X-3356-638-1	MOTOR (REEL R) ASSY	
569	* 1-634-323-11	TRANSLATION BOARD		M1052	X-3356-604-1	MOTOR (ASSIST) ASSY	
570	* 3-356-629-01	BRACKET (THRUST RETAINER R)		M1053	X-3356-635-1	MOTOR (CAPSTAN R2) ASSY	
				S1001	1-466-525-11	ENCODER, ROTARY	

## SECTION 7

### ELECTRICAL PARTS LIST

## NOTE :

The components identified by mark  $\triangle$  or dotted line with mark  $\triangle$  are critical for safety.  
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- - XX, - X mean standardized parts, so they may have some difference from the original one.
- RESISTORS  
All resistors are in ohms.  
METAL : metal-film resistor  
METAL OXIDE: Metal Oxide-film resistor  
F : nonflammable
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS  
In each case, u :  $\mu$ , for example:  
uA... :  $\mu$ A... ,  $\mu$ PA... ,  $\mu$ PA... ,  
 $\mu$ PB... ,  $\mu$ PB... ,  $\mu$ PC... ,  $\mu$ PC... ,  
 $\mu$ PD... ,  $\mu$ PD...
- CAPACITORS :  
uF :  $\mu$ F
- COILS  
uH :  $\mu$ H

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
	* A-2006-452-A	MAIN BOARD, COMPLETE		C202	1-136-157-00	FILM	0.022uF 5% 50V
		*****		C203	1-124-282-00	ELECT	22uF 20% 25V
				C205	1-136-158-00	FILM	0.027uF 5% 50V
	* 1-573-496-11	HOUSING, CONNECTOR 12P		C206	1-162-294-31	CERAMIC	0.001uF 10% 50V
	* 1-573-497-11	PIN, CONNECTOR (PC BOARD) 12P		C207	1-124-907-11	ELECT	10uF 20% 50V
	* 3-356-925-01	HEAT SINK		C208	1-126-233-11	ELECT	22uF 20% 50V
	7-682-547-04	SCREW +BVTT 3X6 (S)		C209	1-130-475-00	MYLAR	0.0022uF 5% 50V
		< CAPACITOR >		C210	1-130-475-00	MYLAR	0.0022uF 5% 50V
C101	1-162-294-31	CERAMIC	0.001uF 10% 50V	C211	1-136-174-00	FILM	0.56uF 5% 50V
C102	1-136-157-00	FILM	0.022uF 5% 50V	C212	1-136-171-00	FILM	0.33uF 5% 50V
C103	1-124-282-00	ELECT	22uF 20% 25V	C213	1-124-907-11	ELECT	10uF 20% 50V
C105	1-136-158-00	FILM	0.027uF 5% 50V	C214	1-124-902-00	ELECT	0.47uF 20% 50V
C106	1-162-294-31	CERAMIC	0.001uF 10% 50V	C215	1-124-927-11	ELECT	4.7uF 20% 100V
C107	1-124-907-11	ELECT	10uF 20% 50V	C216	1-124-927-11	ELECT	4.7uF 20% 100V
C108	1-126-233-11	ELECT	22uF 20% 50V	C217	1-124-925-11	ELECT	2.2uF 20% 100V
C109	1-130-475-00	MYLAR	0.0022uF 5% 50V	C218	1-162-285-31	CERAMIC	180PF 10% 50V
C110	1-130-475-00	MYLAR	0.0022uF 5% 50V	C219	1-136-935-11	FILM	22PF 5% 630V
C111	1-136-174-00	FILM	0.56uF 5% 50V	C220	1-130-468-00	MYLAR	560PF 5% 50V
C112	1-136-171-00	FILM	0.33uF 5% 50V	C221	1-136-433-11	FILM	100PF 5% 630V
C113	1-124-907-11	ELECT	10uF 20% 50V	C222	1-136-272-00	FILM	68PF 5% 630V
C114	1-124-902-00	ELECT	0.47uF 20% 50V	C223	1-136-153-00	FILM	0.01uF 5% 50V
C115	1-124-927-11	ELECT	4.7uF 20% 100V	C224	1-136-165-00	FILM	0.1uF 5% 50V
C116	1-124-927-11	ELECT	4.7uF 20% 100V	C225	1-136-157-00	FILM	0.022uF 5% 50V
C117	1-124-925-11	ELECT	2.2uF 20% 100V	C301	1-124-443-00	ELECT	100uF 20% 10V
C118	1-162-285-31	CERAMIC	180PF 10% 50V	C302	1-124-443-00	ELECT	100uF 20% 10V
C119	1-136-935-11	FILM	22PF 5% 630V	C303	1-124-907-11	ELECT	10uF 20% 50V
C120	1-130-468-00	MYLAR	560PF 5% 50V	C304	1-124-907-11	ELECT	10uF 20% 50V
C121	1-136-433-11	FILM	100PF 5% 630V	C305	1-124-478-11	ELECT	100uF 20% 25V
C122	1-136-272-00	FILM	68PF 5% 630V	C306	1-124-925-11	ELECT	2.2uF 20% 100V
C123	1-136-153-00	FILM	0.01uF 5% 50V	C307	1-124-902-00	ELECT	0.47uF 20% 50V
C124	1-136-165-00	FILM	0.1uF 5% 50V	C308	1-162-215-31	CERAMIC	47PF 5% 50V
C125	1-136-157-00	FILM	0.022uF 5% 50V	C309	1-161-494-00	CERAMIC	0.022uF 5% 25V
C201	1-162-294-31	CERAMIC	0.001uF 10% 50V	C310	1-162-286-31	CERAMIC	220PF 10% 50V
				C311	1-124-925-11	ELECT	2.2uF 20% 100V
				C312	1-124-477-11	ELECT	47uF 20% 25V

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remarks</u>			<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remarks</u>
C313	1-124-902-00	ELECT	0.47uF	20%	50V				< DIODE >
C314	1-124-478-11	ELECT	100uF	20%	25V	D101	8-719-912-20	DIODE	1SS120
C315	1-124-478-11	ELECT	100uF	20%	25V	D201	8-719-912-20	DIODE	1SS120
C316	1-130-856-00	FILM	0.0068uF	5%	100V	D301	8-719-912-20	DIODE	1SS120
C317	1-136-230-00	FILM	0.0022uF	5%	100V	D302	8-719-912-20	DIODE	1SS120
C318	1-136-230-00	FILM	0.0022uF	5%	100V	D303	8-719-912-20	DIODE	1SS120
C319	1-124-907-11	ELECT	10uF	20%	50V	D304	8-719-933-50	DIODE	HZS7C2L
C320	1-161-494-00	CERAMIC	0.022uF	5%	25V	D305	8-719-912-20	DIODE	1SS120
C321	1-136-558-11	FILM	0.0039uF	5%	630V	D306	8-719-912-20	DIODE	1SS120
C322	1-107-046-00	MICA	4.7PF		500V	D307	8-719-912-20	DIODE	1SS120
C701	1-124-443-00	ELECT	100uF	20%	10V	D308	8-719-912-20	DIODE	1SS120
C702	1-164-159-11	CERAMIC	0.1uF		50V	D309	8-719-912-20	DIODE	1SS120
C703	1-164-159-11	CERAMIC	0.1uF		50V	D601	8-719-301-38	DIODE	SEL2210S-C(AUTO REC LEVEL)
C704	1-164-159-11	CERAMIC	0.1uF		50V	D701	8-719-912-20	DIODE	1SS120
C705	1-124-443-00	ELECT	100uF	20%	10V	D702	8-719-912-20	DIODE	1SS120
C706	1-124-925-11	ELECT	2.2uF	20%	100V	D703	8-719-933-50	DIODE	HZS7C2L
C707	1-164-159-11	CERAMIC	0.1uF		50V	D704	8-719-933-50	DIODE	HZS7C2L
C708	1-136-165-00	FILM	0.1uF	5%	50V	D705	8-719-933-50	DIODE	HZS7C2L
C709	1-136-165-00	FILM	0.1uF	5%	50V	D706	8-719-933-50	DIODE	HZS7C2L
C720	1-164-159-11	CERAMIC	0.1uF		50V	D707	8-719-933-50	DIODE	HZS7C2L
C750	1-161-494-00	CERAMIC	0.022uF		25V	D708	8-719-933-50	DIODE	HZS7C2L
C751	1-161-494-00	CERAMIC	0.022uF		25V	D709	8-719-933-50	DIODE	HZS7C2L
C752	1-161-494-00	CERAMIC	0.022uF		25V	D710	8-719-933-50	DIODE	HZS7C2L
C753	1-161-494-00	CERAMIC	0.022uF		25V	D711	8-719-933-50	DIODE	HZS7C2L
C754	1-161-494-00	CERAMIC	0.022uF		25V	D712	8-719-933-50	DIODE	HZS7C2L
C801	1-124-907-11	ELECT	10uF	20%	50V	D713	8-719-912-20	DIODE	1SS120
C802	1-136-594-11	FILM	0.018uF	5%	100V	D714	8-719-912-20	DIODE	1SS120
C803	1-124-907-11	ELECT	10uF	20%	50V	D720	8-719-200-77	DIODE	10E2N
< CONNECTOR >									
CN701	* 1-568-834-11	SOCKET, CONNECTOR 15P				D721	8-719-200-77	DIODE	10E2N
CN702	* 1-568-834-11	SOCKET, CONNECTOR 15P				D722	8-719-200-77	DIODE	10E2N
CNP301	* 1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P				D750	8-719-933-47	DIODE	HZS7B2L
CNP302	* 1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P				D751	8-719-933-47	DIODE	HZS7B2L
CNP303	* 1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P				D752	8-719-912-20	DIODE	1SS120
CNP304	* 1-564-511-11	PLUG, CONNECTOR 8P				D753	8-719-912-20	DIODE	1SS120
CNP305	* 1-564-518-11	PLUG, CONNECTOR 3P				D801	8-719-109-89	DIODE	RDS.6ESB2
CNP702	* 1-564-339-00	PIN, CONNECTOR 5P				D802	8-719-200-77	DIODE	10E2N
CNP703	* 1-564-505-11	PLUG, CONNECTOR 2P				D803	8-719-200-77	DIODE	10E2N
< COMPOSITION CIRCUIT BLOCK >									
CP701	1-233-199-11	COMPOSITION CIRCUIT BLOCK				D804	8-719-200-77	DIODE	10E2N
CP702	1-233-199-11	COMPOSITION CIRCUIT BLOCK				D805	8-719-200-77	DIODE	10E2N
CP703	1-232-944-11	COMPOSITION CIRCUIT BLOCK							

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>		<u>Remarks</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>		<u>Remarks</u>
< IC >									
IC301	8-759-111-44	IC	uPC4570C-1		Q310	8-729-900-65	TRANSISTOR	DTC144ES	
IC302	8-752-036-34	IC	CXA1330S		Q311	8-729-900-61	TRANSISTOR	DTA114ES	
IC303	8-752-038-02	IC	CXA1198AP		Q312	8-729-900-80	TRANSISTOR	DTC114ES	
IC304	8-759-945-58	IC	RC4558P		Q313	8-729-900-80	TRANSISTOR	DTC114ES	
IC305	8-759-945-58	IC	RC4558P		Q314	8-729-900-80	TRANSISTOR	DTC114ES	
IC306	8-759-106-56	IC	uPC1297CA		Q315	8-729-821-04	TRANSISTOR	2SA1317-STU	
IC701	8-759-633-86	IC	M50747-B83SP		Q316	8-729-194-57	TRANSISTOR	2SC945-P	
IC702	8-759-634-79	IC	M50944-155SP		Q317	8-729-194-57	TRANSISTOR	2SC945-P	
IC703	8-759-973-95	IC	BA6219B		Q318	8-729-900-65	TRANSISTOR	DTA144ES	
IC704	8-759-822-09	IC	LB1641		Q701	8-729-900-80	TRANSISTOR	DTC114ES	
IC705	8-759-240-69	IC	TC4069UBP		Q702	8-729-900-80	TRANSISTOR	DTC114ES	
IC706	8-759-822-09	IC	LB1641		Q703	8-729-900-80	TRANSISTOR	DTC114ES	
< COIL >									
L101	1-410-780-11	INDUCTOR	27mH		Q704	8-729-820-24	TRANSISTOR	2SC3330-T	
L201	1-410-780-11	INDUCTOR	27mH		Q705	8-729-820-24	TRANSISTOR	2SC3330-T	
L301	1-408-080-00	INDUCTOR	100uH		Q706	8-729-900-89	TRANSISTOR	DTC144ES	
L801	1-410-761-11	INDUCTOR	0.68mH		Q707	8-729-821-04	TRANSISTOR	2SA1317-STU	
L802	1-408-575-11	INDUCTOR	100uH		Q708	8-729-900-61	TRANSISTOR	DTA114ES	
L803	1-408-575-11	INDUCTOR	100uH		Q709	8-729-900-61	TRANSISTOR	DTA114ES	
< FILTER >									
LPF101	1-236-087-11	FILTER, LOW PASS			< RESISTOR >				
LPF201	1-236-087-11	FILTER, LOW PASS			R101	1-249-435-11	CARBON	33K 5% 1/4W	
< TRANSISTOR >									
Q101	8-729-900-89	TRANSISTOR	DTC144ES		R102	1-249-403-11	CARBON	68 5% 1/4W	
Q102	8-729-900-74	TRANSISTOR	DTC143TS		R103	1-247-882-11	CARBON	130K 5% 1/4W	
Q103	8-729-821-31	TRANSISTOR	2SD1012-FG		R104	1-249-426-11	CARBON	5.6K 5% 1/4W	
Q201	8-729-900-89	TRANSISTOR	DTC144ES		R105	1-249-420-11	CARBON	1.8K 5% 1/4W	
Q202	8-729-900-74	TRANSISTOR	DTC143TS		R107	1-247-887-00	CARBON	220K 5% 1/4W	
Q203	8-729-821-31	TRANSISTOR	2SD1012-FG		R108	1-247-840-00	CARBON	2.4K 5% 1/4W	
Q301	8-729-900-65	TRANSISTOR	DTA144ES		R110	1-249-423-11	CARBON	3.3K 5% 1/4W	
Q302	8-729-900-89	TRANSISTOR	DTC144ES		R111	1-249-428-11	CARBON	8.2K 5% 1/4W	
Q303	8-729-900-89	TRANSISTOR	DTC144ES		R112	1-247-864-11	CARBON	24K 5% 1/4W	
Q304	8-729-820-24	TRANSISTOR	2SC3330-T		R113	1-249-414-11	CARBON	560 5% 1/4W	
Q305	8-729-900-89	TRANSISTOR	DTC144ES		R114	1-249-417-11	CARBON	1K 5% 1/4W	
Q306	8-729-821-04	TRANSISTOR	2SA1317-STU		R115	1-247-846-11	CARBON	4.3K 5% 1/4W	
Q307	8-729-900-65	TRANSISTOR	DTA144ES		R116	1-249-423-11	CARBON	3.3K 5% 1/4W	
Q308	8-729-900-65	TRANSISTOR	DTA144ES		R117	1-249-417-11	CARBON	1K 5% 1/4W	
Q309	8-729-900-89	TRANSISTOR	DTC144ES						

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
R118	1-249-429-11	CARBON	10K 5% 1/4W	R304	1-249-435-11	CARBON	33K 5% 1/4W
R119	1-249-425-11	CARBON	4.7K 5% 1/4W	R305	1-249-436-11	CARBON	39K 5% 1/4W
R120	1-249-421-11	CARBON	2.2K 5% 1/4W	R306	1-247-880-11	CARBON	110K 5% 1/4W
R121	1-249-429-11	CARBON	10K 5% 1/4W	R307	1-247-885-00	CARBON	180K 5% 1/4W
R122	1-249-425-11	CARBON	4.7K 5% 1/4W	R308	1-249-436-11	CARBON	39K 5% 1/4W
R124	1-249-429-11	CARBON	10K 5% 1/4W	R309	1-247-881-00	CARBON	120K 5% 1/4W
R125	1-249-437-11	CARBON	47K 5% 1/4W	R310	1-247-874-11	CARBON	62K 5% 1/4W
R126	1-249-431-11	CARBON	15K 5% 1/4W	R311	1-247-872-11	CARBON	51K 5% 1/4W
R127	1-249-409-11	CARBON	220 5% 1/4W	R312	1-247-889-00	CARBON	270K 5% 1/4W
R128	1-249-428-11	CARBON	8.2K 5% 1/4W	R313	1-247-883-00	CARBON	150K 5% 1/4W
R129	1-247-883-00	CARBON	150K 5% 1/4W	R314	1-247-870-11	CARBON	43K 5% 1/4W
R130	1-249-393-11	CARBON	10 5% 1/4W	R315	1-247-893-11	CARBON	390K 5% 1/4W
R131	1-249-432-11	CARBON	18K 5% 1/4W	R316	1-249-438-11	CARBON	56K 5% 1/4W
R132	1-249-439-11	CARBON	10K 5% 1/4W	R317	1-247-872-11	CARBON	51K 5% 1/4W
R201	1-249-435-11	CARBON	33K 5% 1/4W	R318	1-247-876-11	CARBON	75K 5% 1/4W
R202	1-249-403-11	CARBON	68 5% 1/4W	R319	1-249-441-11	CARBON	100K 5% 1/4W
R203	1-247-882-11	CARBON	130K 5% 1/4W	R320	1-249-438-11	CARBON	56K 5% 1/4W
R204	1-249-426-11	CARBON	5.6K 5% 1/4W	R321	1-247-881-00	CARBON	120K 5% 1/4W
R205	1-249-420-11	CARBON	1.8K 5% 1/4W	R322	1-249-433-11	CARBON	22K 5% 1/4W
R207	1-247-887-00	CARBON	220K 5% 1/4W	R323	1-249-409-11	CARBON	220 5% 1/4W
R208	1-247-840-00	CARBON	2.4K 5% 1/4W	R324	1-249-433-11	CARBON	22K 5% 1/4W
R210	1-249-423-11	CARBON	3.3K 5% 1/4W	R325	1-249-433-11	CARBON	22K 5% 1/4W
R211	1-249-428-11	CARBON	8.2K 5% 1/4W	R326	1-249-425-11	CARBON	4.7K 5% 1/4W
R212	1-247-864-11	CARBON	24K 5% 1/4W	R327	1-247-887-00	CARBON	220K 5% 1/4W
R213	1-249-414-11	CARBON	560 5% 1/4W	R328	1-249-429-11	CARBON	10K 5% 1/4W
R215	1-247-846-11	CARBON	4.3K 5% 1/4W	R329	1-249-441-11	CARBON	100K 5% 1/4W
R216	1-249-423-11	CARBON	3.3K 5% 1/4W	R330	1-249-428-11	CARBON	8.2K 5% 1/4W
R217	1-249-417-11	CARBON	1K 5% 1/4W	R331	1-249-423-11	CARBON	3.3K 5% 1/4W
R218	1-249-429-11	CARBON	10K 5% 1/4W	R332	1-249-417-11	CARBON	1K 5% 1/4W
R219	1-249-425-11	CARBON	4.7K 5% 1/4W	R333	1-249-441-11	CARBON	100K 5% 1/4W
R220	1-249-421-11	CARBON	2.2K 5% 1/4W	R334	1-249-441-11	CARBON	100K 5% 1/4W
R221	1-249-429-11	CARBON	10K 5% 1/4W	R335	1-249-419-11	CARBON	1.5K 5% 1/4W
R222	1-249-425-11	CARBON	4.7K 5% 1/4W	R336	1-247-850-11	CARBON	6.2K 5% 1/4W
R224	1-249-429-11	CARBON	10K 5% 1/4W	R337	1-249-421-11	CARBON	2.2K 5% 1/4W
R225	1-249-437-11	CARBON	47K 5% 1/4W	R338	1-249-429-11	CARBON	10K 5% 1/4W
R226	1-249-431-11	CARBON	15K 5% 1/4W	R339	1-249-429-11	CARBON	10K 5% 1/4W
R227	1-249-409-11	CARBON	220 5% 1/4W	R340	1-249-437-11	CARBON	47K 5% 1/4W
R228	1-249-428-11	CARBON	8.2K 5% 1/4W	R341	1-249-437-11	CARBON	47K 5% 1/4W
R229	1-247-883-00	CARBON	150K 5% 1/4W	R342	△1-212-851-00	FUSIBLE	5.6 5% 1/4W F
R230	1-249-393-11	CARBON	10 5% 1/4W	R343	1-215-455-00	METAL	27K 1% 1/6W
R231	1-247-432-11	CARBON	18K 5% 1/4W	R344	1-247-864-11	CARBON	24K 5% 1/4W
R232	1-249-439-11	CARBON	10K 5% 1/4W	R345	1-249-437-11	CARBON	47K 5% 1/4W
R301	1-249-409-11	CARBON	220 5% 1/4W	R601	1-249-410-11	CARBON	270 5% 1/4W
R302	1-249-409-11	CARBON	220 5% 1/4W	R602	1-249-415-11	CARBON	680 5% 1/4W
R303	1-249-433-11	CARBON	22K 5% 1/4W	R701	1-249-429-11	CARBON	10K 5% 1/4W

Note: The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remarks</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remarks</u>
R702	1-249-429-11	CARBON	10K 5% 1/4W	R748	1-249-429-11	CARBON	10K 5% 1/4W
R703	1-249-425-11	CARBON	4.7K 5% 1/4W	R749	1-249-429-11	CARBON	10K 5% 1/4W
R704	1-249-425-11	CARBON	4.7K 5% 1/4W	R771	1-249-405-11	CARBON	100 5% 1/4W
R705	1-249-425-11	CARBON	4.7K 5% 1/4W	R772	1-249-405-11	CARBON	100 5% 1/4W
R706	1-247-903-00	CARBON	1M 5% 1/4W	R773	1-249-405-11	CARBON	100 5% 1/4W
R707	1-249-433-11	CARBON	22K 5% 1/4W	R780	1-249-433-11	CARBON	22K 5% 1/4W
R708	1-249-411-11	CARBON	330 5% 1/4W	R801	1-249-431-11	CARBON	15K 5% 1/4W
R709	1-247-830-11	CARBON	910 5% 1/4W	R802	1-249-431-11	CARBON	15K 5% 1/4W
R710	1-249-418-11	CARBON	1.2K 5% 1/4W				< VARIABLE RESISTOR >
R711	1-249-417-11	CARBON	1K 5% 1/4W				
R712	△1-212-950-00	FUSIBLE	4.7 5% 1/2W F	RV101	1-238-597-11	RES, ADJ, CARBON 1K	
R713	1-249-421-11	CARBON	2.2K 5% 1/4W	RV102	1-238-600-11	RES, ADJ, CARBON 10K	
R714	1-249-419-11	CARBON	1.5K 5% 1/4W	RV103	1-238-601-11	RES, ADJ, CARBON 22K	
R715	1-249-417-11	CARBON	1K 5% 1/4W	RV201	1-238-597-11	RES, ADJ, CARBON 1K	
R716	△1-212-950-00	FUSIBLE	4.7 5% 1/2W F	RV202	1-238-600-11	RES, ADJ, CARBON 10K	
R717	1-249-436-11	CARBON	39K 5% 1/4W	RV203	1-238-601-11	RES, ADJ, CARBON 22K	
R718	1-249-436-11	CARBON	39K 5% 1/4W	RV301	1-241-232-11	RES, VAR, CARBON 20K/20K/20K (REC LEVEL)	
R719	1-247-887-00	CARBON	220K 5% 1/4W				< RELAY >
R720	1-247-887-00	CARBON	220K 5% 1/4W				
R721	1-249-425-11	CARBON	4.7K 5% 1/4W	RY301	1-515-726-11	RELAY	
R722	1-249-425-11	CARBON	4.7K 5% 1/4W				< SWITCH >
R724	1-249-433-11	CARBON	22K 5% 1/4W				
R725	1-247-903-00	CARBON	1M 5% 1/4W	S601	1-554-303-21	SWITCH, TACTILE (AUTO REC LEVEL)	
R726	1-249-429-11	CARBON	10K 5% 1/4W	S605	1-554-303-21	SWITCH, TACTILE (△ OPEN/CLOSE)	
R727	1-249-425-11	CARBON	4.7K 5% 1/4W				
R728	1-249-425-11	CARBON	4.7K 5% 1/4W				< TRANSFORMER >
R729	1-249-425-11	CARBON	4.7K 5% 1/4W				
R730	1-249-433-11	CARBON	22K 5% 1/4W	T101	1-433-335-11	TRANSFORMER, BIAS OSCILLATION	
R731	1-249-433-11	CARBON	22K 5% 1/4W	T201	1-433-335-11	TRANSFORMER, BIAS OSCILLATION	
R732	1-249-424-11	CARBON	3.9K 5% 1/4W	T301	1-433-336-11	TRANSFORMER, BIAS OSCILLATION	
R733	1-249-429-11	CARBON	10K 5% 1/4W	T801	1-450-673-11	TRANSFORMER, DC-DC CONVERTER	
R734	1-249-441-11	CARBON	100K 5% 1/4W				< CRYSTAL >
R735	1-249-439-11	CARBON	68K 5% 1/4W				
R736	1-249-417-11	CARBON	1K 5% 1/4W	X701	1-577-358-21	VIBRATOR, CERAMIC 4MHz	
R737	1-249-417-11	CARBON	1K 5% 1/4W	X702	1-577-358-21	VIBRATOR, CERAMIC 4MHz	
R738	△1-212-950-00	FUSIBLE	4.7 5% 1/2W F				
R739	1-249-429-11	CARBON	10K 5% 1/4W				*****
R740	1-249-429-11	CARBON	10K 5% 1/4W				
R741	1-249-415-11	CARBON	680 5% 1/4W				* 1-632-740-11 MD BOARD
R742	1-249-420-11	CARBON	1.8K 5% 1/4W				*****
R743	1-249-410-11	CARBON	270 5% 1/4W				3-356-631-01 HOLDER (SENSOR)
R744	1-249-421-11	CARBON	2.2K 5% 1/4W				
R745	1-249-421-11	CARBON	2.2K 5% 1/4W				< CONNECTOR >
R746	1-249-421-11	CARBON	2.2K 5% 1/4W				
R747	1-249-421-11	CARBON	2.2K 5% 1/4W	CN1001	1-506-615-11	PIN, CONNECTOR 9P	
				CN1002	* 1-564-502-11	PIN, CONNECTOR 10P	

Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

MD PANEL

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>				<u>Remarks</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>				<u>Remarks</u>
TB1001	* 1-569-066-11	PIN, CONNECTOR 5P					D603	8-719-988-62	DIODE	1SS355			
		< IC >							< INDICATOR >				
IC1001	8-749-920-97	IC PHOTO REFLECTOR GP2S22B(SUPPLY REEL)					FL601	1-519-656-11	INDICATOR TUBE, FLUORESCENT				
IC1002	8-749-920-97	IC PHOTO REFLECTOR GP2S22B (TAKE UP REEL)							< IC >				
		< RESISTOR >					IC601	8-759-323-62	IC	HD614023FA89			
R1001	1-249-408-11	CARBON	180	5%	1/4W				< RESISTOR >				
R1002	1-249-408-11	CARBON	180	5%	1/4W		R603	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	
		< SWITCH >					R604	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
S1001	1-466-526-11	ENCODER, ROTARY					R605	1-216-063-00	METAL CHIP	3.9K	5%	1/10W	
S1002	1-570-953-11	SWITCH, PUSH (1 KEY) (DOOR)					R606	1-216-029-00	METAL CHIP	150	5%	1/10W	
S1003	1-571-958-11	SWITCH, PUSH (1 KEY) (CLOSE)					R607	1-216-033-00	METAL CHIP	220	5%	1/10W	
S1004	1-572-126-11	SWITCH, PUSH (1 KEY) (OPEN)					R608	1-216-037-00	METAL CHIP	330	5%	1/10W	
S1005	1-572-125-11	SWITCH, LEAF (FWD TAB)					R609	1-216-041-00	METAL CHIP	470	5%	1/10W	
S1006	1-572-202-11	SWITCH, LEAF (HALF)					R610	1-216-045-00	METAL CHIP	680	5%	1/10W	
S1007	1-572-125-11	SWITCH, LEAF (METAL)					R611	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
S1008	1-572-125-11	SWITCH, LEAF (70uS)					R612	1-216-051-00	METAL CHIP	1.2K	5%	1/10W	
S1009	1-572-125-11	SWITCH, LEAF (REV TAB)					R613	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	
*****													
* A-2006-453-A PANEL BOARD, COMPLETE													
*****													
* 3-368-109-01 HOLDER, FL TUBE													
* 4-921-941-01 CUSHION (FL)													
< CAPACITOR >													
C601	1-164-232-11	CERAMIC CHIP	0.01uF		50V		S602	1-554-303-21	SWITCH, TACTILE (<<>>)				
C602	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V		S603	1-554-303-21	SWITCH, TACTILE (>>)				
C603	1-163-137-00	CERAMIC CHIP	680P	10%	50V		S604	1-554-303-21	SWITCH, TACTILE (● REC)				
C604	1-163-137-00	CERAMIC CHIP	680P	10%	50V		S606	1-554-303-21	SWITCH, TACTILE (□)				
C605	1-163-137-00	CERAMIC CHIP	680P	10%	50V		S607	1-554-303-21	SWITCH, TACTILE (▷)				
C606	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V		S608	1-554-303-21	SWITCH, TACTILE (< )				
< CONNECTOR >													
CN601	* 1-568-858-11	SOCKET, CONNECTOR 15P					S609	1-554-303-21	SWITCH, TACTILE (■ PAUSE)				
CNP601	* 1-564-495-11	PIN, CONNECTOR 2P					S610	1-554-303-21	SWITCH, TACTILE (● MUTE)				
< DIODE >													
D601	8-719-301-38	DIODE	SEL2210-C				S611	1-554-303-21	SWITCH, TACTILE (COUNTER RESET)				
D602	8-719-988-62	DIODE	1SS355				S612	1-570-834-11	SWITCH, SLIDE (DOLBY NR)				
< CRYSTAL >													
X601	1-577-359-21	VIBRATOR, CERAMIC	4.19MHz										

## PIN JACK

Ref. No.	Part No.	Description	Remarks			Ref. No.	Part No.	Description	Remarks										
*****																			
* A-2006-548-A PIN JACK BOARD, COMPLETE																			
*****																			
< CAPACITOR >																			
C401	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	C487	1-164-232-11	CERAMIC CHIP	0.01uF	50V									
C402	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	C488	1-164-232-11	CERAMIC CHIP	0.01uF	50V									
C403	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	C489	1-164-232-11	CERAMIC CHIP	0.01uF	50V									
C404	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	C490	1-164-232-11	CERAMIC CHIP	0.01uF	50V									
C405	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	C491	1-164-232-11	CERAMIC CHIP	0.01uF	50V									
C407	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	C492	1-164-232-11	CERAMIC CHIP	0.01uF	50V									
C409	1-124-465-00	ELECT	0.47uF	20%	50V	C493	1-164-232-11	CERAMIC CHIP	0.01uF	50V									
C410	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	C494	1-164-232-11	CERAMIC CHIP	0.01uF	50V									
C411	1-126-163-11	ELECT	4.7uF	20%	50V	C495	1-164-232-11	CERAMIC CHIP	0.01uF	50V									
C412	1-163-018-00	CERAMIC CHIP	0.0056uF	5%	50V	C496	1-164-232-11	CERAMIC CHIP	0.01uF	50V									
C413	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V	C497	1-126-301-11	ELECT	1uF	20%	50V								
C414	1-124-257-00	ELECT	2.2uF	20%	50V	C4001	1-163-119-00	CERAMIC CHIP	120PF	5%	50V								
C416	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	C4002	1-163-119-00	CERAMIC CHIP	120PF	5%	50V								
C417	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	C4003	1-124-589-11	ELECT	47uF	20%	16V								
C418	1-126-157-11	ELECT	10uF	20%	16V	C4010	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V								
C419	1-126-157-11	ELECT	10uF	20%	16V	C4013	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V								
C451	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	C4020	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V								
C452	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	C4021	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V								
C453	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	C4022	1-124-589-11	ELECT	47uF	20%	16V								
C454	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	< CONNECTOR >													
C455	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	CN401	* 1-568-834-11	SOCKET, CONNECTOR 15P											
C457	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	CNJ401	* 1-580-740-11	SOCKET, CONNECTOR 17P											
C459	1-124-465-00	ELECT	0.47uF	20%	50V	CNJ402	* 1-573-187-11	PIN, CONNECTOR (PC BOARD) 7P											
C460	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	CNJ403	* 1-573-388-11	PIN, CONNECTOR (PC BOARD) 8P											
C461	1-126-163-11	ELECT	4.7uF	20%	50V	< DIODE >													
C462	1-163-018-00	CERAMIC CHIP	0.0056uF	5%	50V	D401	8-719-990-36	DIODE	DCA010										
C463	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V	D403	8-719-210-33	DIODE	EC10DS2										
C464	1-124-257-00	ELECT	2.2uF	20%	50V	D404	8-719-210-33	DIODE	EC10DS2										
C466	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	D405	8-719-990-36	DIODE	DCA010										
C467	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	D4001	8-719-988-62	DIODE	1SS355										
C468	1-126-012-11	ELECT	470uF	20%	16V	D4002	8-719-988-62	DIODE	1SS355										
C469	1-126-012-11	ELECT	470uF	20%	16V	< IC >													
C470	1-126-012-11	ELECT	470uF	20%	16V	IC401	8-759-636-55	IC	M5218Afp										
C481	1-164-232-11	CERAMIC CHIP	0.01uF		50V	IC402	8-759-636-55	IC	M5218Afp										
C482	1-164-232-11	CERAMIC CHIP	0.01uF		50V	IC403	8-759-009-05	IC	MC14051BF										
C483	1-126-177-11	ELECT	100uF	20%	10V	IC404	8-759-009-05	IC	MC14051BF										
C484	1-164-232-11	CERAMIC CHIP	0.01uF		50V	IC405	8-759-516-47	IC	CD4066BCM										
C485	1-164-232-11	CERAMIC CHIP	0.01uF		50V	IC406	8-759-636-35	IC	M50760-315FP										
C486	1-126-157-11	ELECT	10uF	20%	16V	IC407	8-759-991-77	IC	BA7625										

**PIN JACK**

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>			<u>Remarks</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>			<u>Remarks</u>
< JACK >											
J401	1-565-304-11	JACK, PIN 4P (AUDIO)				R415	1-216-049-00	METAL CHIP	1K	5%	1/10W
J402	* 1-569-812-11	JACK, PIN 6P (AUDIO)				R417	1-216-089-00	METAL CHIP	47K	5%	1/10W
J403	1-565-933-11	JACK, PIN 3P (VIDEO)				R418	1-216-049-00	METAL CHIP	1K	5%	1/10W
J404	1-573-144-11	JACK, PIN 2P (VIDEO)				R419	1-216-115-00	METAL CHIP	560K	5%	1/10W
< JUMPER >											
JW2	1-216-295-00	METAL CHIP	0	5%	1/10W	R420	1-216-089-00	METAL CHIP	47K	5%	1/10W
JW3	1-216-295-00	METAL CHIP	0	5%	1/10W	R421	1-216-001-00	METAL CHIP	10	5%	1/10W
JW8	1-216-295-00	METAL CHIP	0	5%	1/10W	R422	1-216-075-00	METAL CHIP	12K	5%	1/10W
JW10	1-216-295-00	METAL CHIP	0	5%	1/10W	R423	1-216-041-00	METAL CHIP	470	5%	1/10W
JW12	1-216-295-00	METAL CHIP	0	5%	1/10W	R425	1-216-025-00	METAL CHIP	100	5%	1/10W
JW413	1-216-295-00	METAL CHIP	0	5%	1/10W	R426	1-216-089-00	METAL CHIP	47K	5%	1/10W
JW414	1-216-295-00	METAL CHIP	0	5%	1/10W	R427	1-216-089-00	METAL CHIP	47K	5%	1/10W
JW439	1-216-295-00	METAL CHIP	0	5%	1/10W	R428	1-216-089-00	METAL CHIP	47K	5%	1/10W
JW441	1-216-295-00	METAL CHIP	0	5%	1/10W	R429	1-216-089-00	METAL CHIP	47K	5%	1/10W
JW463	1-216-295-00	METAL CHIP	0	5%	1/10W	R430	1-216-089-00	METAL CHIP	47K	5%	1/10W
JW464	1-216-295-00	METAL CHIP	0	5%	1/10W	R431	1-216-022-00	METAL CHIP	75	5%	1/10W
< COIL >											
L401	1-408-789-21	INDUCTOR, CHIP 100uH				R432	1-216-022-00	METAL CHIP	75	5%	1/10W
L4001	1-408-777-00	INDUCTOR, CHIP 10uF				R434	1-216-073-00	METAL CHIP	10K	5%	1/10W
< TRANSISTOR >											
Q401	8-729-805-65	TRANSISTOR	2SA1344			R435	1-216-073-00	METAL CHIP	10K	5%	1/10W
Q402	8-729-805-65	TRANSISTOR	2SA1344			R436	1-216-089-00	METAL CHIP	47K	5%	1/10W
Q403	8-729-602-36	TRANSISTOR	2SA1602-F			R437	1-216-121-00	METAL CHIP	1M	5%	1/10W
Q404	8-729-602-36	TRANSISTOR	2SA1602-F			R440	1-216-089-00	METAL CHIP	47K	5%	1/10W
Q405	8-729-602-36	TRANSISTOR	2SA1602-F			R442	1-216-089-00	METAL CHIP	47K	5%	1/10W
Q406	8-729-602-36	TRANSISTOR	2SA1602-F			R450	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
Q407	8-729-602-21	TRANSISTOR	2SC4154-F			R451	1-216-049-00	METAL CHIP	1K	5%	1/10W
< RESISTOR >											
R401	1-216-049-00	METAL CHIP	1K	5%	1/10W	R452	1-216-049-00	METAL CHIP	1K	5%	1/10W
R402	1-216-049-00	METAL CHIP	1K	5%	1/10W	R453	1-216-049-00	METAL CHIP	1K	5%	1/10W
R403	1-216-049-00	METAL CHIP	1K	5%	1/10W	R454	1-216-041-00	METAL CHIP	470	5%	1/10W
R404	1-216-041-00	METAL CHIP	470	5%	1/10W	R455	1-216-041-00	METAL CHIP	470	5%	1/10W
R405	1-216-041-00	METAL CHIP	470	5%	1/10W	R457	1-216-115-00	METAL CHIP	560K	5%	1/10W
R407	1-216-115-00	METAL CHIP	560K	5%	1/10W	R458	1-216-115-00	METAL CHIP	560K	5%	1/10W
R408	1-216-115-00	METAL CHIP	560K	5%	1/10W	R459	1-216-115-00	METAL CHIP	560K	5%	1/10W
R409	1-216-115-00	METAL CHIP	560K	5%	1/10W	R460	1-216-115-00	METAL CHIP	560K	5%	1/10W
R410	1-216-115-00	METAL CHIP	560K	5%	1/10W	R461	1-216-115-00	METAL CHIP	560K	5%	1/10W
R411	1-216-115-00	METAL CHIP	560K	5%	1/10W	R465	1-216-049-00	METAL CHIP	1K	5%	1/10W
						R467	1-216-089-00	METAL CHIP	47K	5%	1/10W
						R468	1-216-049-00	METAL CHIP	1K	5%	1/10W
						R469	1-216-115-00	METAL CHIP	560K	5%	1/10W
						R470	1-216-089-00	METAL CHIP	47K	5%	1/10W
						R471	1-216-001-00	METAL CHIP	10	5%	1/10W
						R472	1-216-075-00	METAL CHIP	12K	5%	1/10W
						R473	1-216-041-00	METAL CHIP	470	5%	1/10W
						R475	1-216-025-00	METAL CHIP	100	5%	1/10W
						R476	1-216-089-00	METAL CHIP	47K	5%	1/10W
						R477	1-216-089-00	METAL CHIP	47K	5%	1/10W
						R478	1-216-089-00	METAL CHIP	47K	5%	1/10W

## PIN JACK POWER

Ref. No.	Part. No.	Description	Remarks			Ref. No.	Part. No.	Description	Remarks		
R481	1-216-022-00	METAL CHIP	75	5%	1/10W	C516	1-124-903-11	ELECT	1uF	20%	50V
R482	1-216-022-00	METAL CHIP	75	5%	1/10W	C518	1-124-473-11	ELECT	1000uF	20%	10V
R483	1-216-022-00	METAL CHIP	75	5%	1/10W	C519	1-124-473-11	ELECT	1000uF	20%	10V
R484	1-216-049-00	METAL CHIP	1K	5%	1/10W	C520	1-163-038-00	CERAMIC CHIP	0.1uF		25V
R485	1-216-049-00	METAL CHIP	1K	5%	1/10W	C521	1-163-038-00	CERAMIC CHIP	0.1uF		25V
R486	1-216-049-00	METAL CHIP	1K	5%	1/10W	C526	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
R487	1-216-029-00	METAL CHIP	150	5%	1/10W	C527	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
R488	1-216-029-00	METAL CHIP	150	5%	1/10W	C528	1-164-232-11	CERAMIC CHIP	0.01uF	10%	50V
R489	1-216-031-00	METAL CHIP	180	5%	1/10W	C5001	1-163-009-11	CERAMIC CHIP	1000P	10%	50V
R490	1-216-031-00	METAL CHIP	180	5%	1/10W	C5002	1-163-009-11	CERAMIC CHIP	1000P	10%	50V
R491	1-216-031-00	METAL CHIP	180	5%	1/10W	C5004	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
R492	1-216-029-00	METAL CHIP	150	5%	1/10W	C5005	1-164-232-11	CERAMIC CHIP	0.01uF	10%	50V
R493	1-216-073-00	METAL CHIP	10K	5%	1/10W	C5007	1-164-346-11	CERAMIC CHIP	1uF		16V
R494	1-216-073-00	METAL CHIP	10K	5%	1/10W	( CONNECTOR )					
R495	1-216-081-00	METAL CHIP	22K	5%	1/10W	CN402	* 1-573-187-11	PIN, CONNECTOR (PC BOARD)	7P		
R496	1-216-081-00	METAL CHIP	22K	5%	1/10W	CN403	* 1-573-388-11	PIN, CONNECTOR (PC BOARD)	8P		
R497	1-216-073-00	METAL CHIP	10K	5%	1/10W	( DIODE )					
R499	1-216-073-00	METAL CHIP	10K	5%	1/10W	D501	8-719-210-33	DIODE	EC10DS2		
R500	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	D502	8-719-210-33	DIODE	EC10DS2		
( CRYSTAL )						D503	8-719-210-33	DIODE	EC10DS2		
X401	1-577-077-11	OSCILLATOR, CERAMIC 400KHz	D504	8-719-210-33	DIODE	EC10DS2	D505	8-719-988-62	DIODE	1SS355	
*****						D506	8-719-106-36	DIODE	RD8.2M-B3		
* 1-639-415-11 POWER BOARD						D508	8-719-210-33	DIODE	EC10DS2		
*****						D509	8-719-210-33	DIODE	EC10DS2		
7-685-646-79 SCREW +BVTP 3X8 TYPE N-S						D510	8-719-210-33	DIODE	EC10DS2		
( CAPACITOR )						D511	8-719-210-33	DIODE	EC10DS2		
( FUSE )											
C501	1-124-556-11	ELECT	2200uF	20%	16V	F501	△1-532-843-21	FUSE	2.5A		
C502	1-124-556-11	ELECT	2200uF	20%	16V	F502	△1-532-843-21	FUSE	2.5A		
C503	1-124-360-00	ELECT	1000uF	20%	16V	( IC )					
C504	1-124-556-11	ELECT	2200uF	20%	16V	IC501	8-759-823-46	IC	LA5603		
C505	1-126-059-11	ELECT	10uF	20%	50V	( TRANSISTOR )					
C506	1-163-038-00	CERAMIC CHIP	0.1uF		25V	Q501	8-729-209-15	TRANSISTOR	2SD2012		
C507	1-124-903-11	ELECT	1uF	20%	50V	Q502	8-729-111-67	TRANSISTOR	2SB1094-L		
C508	1-124-472-11	ELECT	470uF	20%	10V	Q503	8-729-805-65	TRANSISTOR	2SA1344		
C509	1-124-472-11	ELECT	470uF	20%	10V	Q504	8-729-602-21	TRANSISTOR	2SC4154-F		
C510	1-124-477-11	ELECT	47uF	20%	25V	Q505	8-729-602-21	TRANSISTOR	2SC4154-F		
C511	1-124-903-11	ELECT	1uF	20%	50V						
C512	1-124-477-11	ELECT	47uF	20%	25V						
C513	1-124-903-11	ELECT	1uF	20%	50V						
C514	1-124-472-11	ELECT	470uF	20%	10V						
C515	1-124-477-11	ELECT	47uF	20%	25V						

Note: The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

**POWER    REEL MOTOR    TRANSLATION**

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>			<u>Remarks</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>			<u>Remarks</u>
Q506	8-729-602-36	TRANSISTOR	2SA1602-EF					MISCELLANEOUS			
Q510	8-729-805-49	TRANSISTOR	2SC3398					*****			
Q511	8-729-602-36	TRANSISTOR	2SA1602-EF								
< RESISTOR >											
R501	1-216-033-00	METAL CHIP	220	5%	1/10W			4	1-575-906-11	WIRE, FLAT TYPE (15 CORE)	
R502	1-216-057-00	METAL CHIP	2.2K	5%	1/10W			11	* 1-573-188-11	CONNECTOR, BRIDGE 7P	
R503	1-216-057-00	METAL CHIP	2.2K	5%	1/10W			12	* 1-573-389-11	CONNECTOR, BRIDGE 8P	
R504	1-216-089-00	METAL CHIP	47K	5%	1/10W			13	1-575-664-11	WIRE, FLAT TYPE (15 CORE)	
R505	1-216-089-00	METAL CHIP	47K	5%	1/10W			D1051	8-719-980-85	DIODE SLF-325C	
R520	1-216-058-00	METAL CHIP	2.4K	5%	1/10W			HRPE1001	A-2003-772-A	BASE ASSY, HEAD	
R521	1-216-056-00	METAL CHIP	2K	5%	1/10W			IC1001	8-749-920-97	IC PHOTO REFLECTOR GP2S22B	
R5001	1-216-025-00	METAL CHIP	100	5%	1/10W			IC1002	8-749-920-97	IC PHOTO REFLECTOR GP2S22B	
R5002	1-216-025-00	METAL CHIP	100	5%	1/10W			M1051	X-3356-638-1	MOTOR (REEL R) ASSY	
*****											
* 1-632-741-11 REEL MOTOR BOARD											
*****											
< CAPACITOR >											
C1051	1-124-907-11	ELECT	10uF		20% 50V			# 1	7-621-773-93	SCREW (PANEL 2.6 TP2)	
C1052	1-124-907-11	ELECT	10uF		20% 50V			# 2	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
C1053	1-164-159-11	CERAMIC	0.1uF		50V			# 3	7-682-547-04	SCREW +BVTT 3X6 (S)	
< CONNECTOR >											
CN1051	* 1-564-499-11	PIN, CONNECTOR 6P						# 4	7-621-283-00	SCREW +BVTT 2X5 (S)	
CN1052	* 1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P						# 5	7-685-133-19	SCREW +BTP 2.6X6 TYPE2 N-S	
CN1053	* 1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P						# 6	7-621-255-20	SCREW +BVTT 2X4 (S)	
< RESISTOR >											
R1051	1-249-414-11	CARBON	560	5%	1/4W			# 7	7-621-255-35	SCREW +BVTT 2X5 (S)	
*****											
* 1-634-323-11 TRANSLATION BOARD											
*****											
< CONNECTOR >											
CN1091	* 1-564-709-11	PIN, CONNECTOR (SMALL TYPE) 7P						# 8	7-621-770-67	SCREW +BVTT 2.6X6 (S)	
CN1092	* 1-564-509-11	PLUG, CONNECTOR 6P						# 9	7-685-131-19	SCREW +BTP 2.6X4 TYPE2 N-S	
*****											